FINAL REPORT

To the City of Seattle
Office of City Auditor

Review of Seattle City Light

October 31, 2002

City Of Seattle
Audit of Seattle City Light Company

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I. EXECUTIVE SUMMARY

A. AUDIT OBJECTIVE AND METHODOLOGY

This report by Vantage Consulting, Inc. (Vantage) was in response to the Request for Proposal from the City of Seattle, Office of City Auditor, for a review of Seattle City Light (SCL) dated March 25, 2002.

The stated purpose of this audit was to address the issues of governance, financial management, and risk management. As the project unfolded, it became evident that we needed to review other management processes. Therefore, in addition to the three major topics that were audited in detail, an additional topic of operational assessment is included.

Vantage's audit responded to the stated objectives by developing a work plan to address the scope as detailed in the Request For Proposal. The work plan was developed around three areas – an assessment of City Light's debt/financial situation; City Light's risk management practices; and a summary of other governance models available for public utilities. Vantage used a team of consultants with over 110 years of utility experience.

B. GENERAL APPROACH

INTERVIEWS AND INFORMATION ANALYSIS

We interviewed approximately sixty individuals. We conducted follow-up interviews with many of these individuals. The interviews included:

- Approximately twenty-five SCL employees, including all relevant SCL senior managers;
- Five members of City Council;
- Executive staff from the Department of Finance and the Office of Policy and Management;
- Meetings with outside groups, including the Municipal League, the Mayor's City Light Review Committee, and concerned citizens; and
- A visit to the Skagit power facility to interview staff and review its operations.

OTHER AUDITS

Given the timeframe for our work, we did not attempt to duplicate the work of other recent audits of SCL. We reviewed the August 2000 Deloitte & Touche audit of SCL's Power Marketing Group, along with studies and reports from financial advisors, credit rating agencies and SCL branches.

REPORT LAYOUT

The layout for this report was developed after all field work and drafts were complete. The report is organized as follows:

Chapter I – Executive Summary – Provides a description of the audit's objectives, methodology, conclusions, and recommendations.

Chapter II – Financial Management – Reviews SCL's past and present financial strategies and provides recommendations for improvement.

Chapter III – Risk Management – Describes risk management in the context of utilities, reviews SCL's risk management practices and provides recommendations for improvement.

Chapter IV – Operational Assessment – Analyzes SCL's budgeting, planning, cost control, staffing, and other key factors that affect financial strength.

Chapter V – Governance– Addresses issues such as oversight, decision making, and responsibility.

Findings and recommendations are numbered as follows: III-F1 refers to the 1st finding in *Chapter III,* IV-R4 is the 4th recommendation in *Chapter IV*.

AUDITING STANDARDS

We followed our own internal guidelines, which require performing this study in accordance with:

- The Comptroller General's Government Auditing Standards related to issues of management economy, efficiency, and effectiveness as applicable to public utilities; and
- The standards in the National Association of Regulatory Utility Commissioners' "Consultant Standards and Ethics for Performance of Management Analysis."

Project Team

The names of the project consultants and areas they addressed are shown below. Together they have over 110 years of utility operations and consulting experience.

Consultant	Position	Areas Addressed
Walt Drabinski, BSEE, MBA	Project Director	Financial management, operational assessment, and overall project management
Chuck Buechel, BS, MA Econ.	Senior Consultant	Governance issues
Richard Mazzini, BEE, MSNE	Senior Consultant	Risk management
Mark Fowler, BSME, MBA	Senior Consultant	Financial management

C. OVERALL CONCLUSION

On this assignment, we encountered a great deal of complexity. The players included the SCL management team, the City Council, the Mayor and other stakeholders. The issues included financial/debt related concerns that clearly go back more than ten years, risk management capabilities at SCL, the overall governance structure that drives decisions, management operations, and the impact of the 2000-2001 energy crisis and drought.

SCL's financial situation has deteriorated significantly and has left rate-payers saddled with heavy debt and higher rates. This is largely the responsibility of SCL senior management. However, the Mayor and the City Council must also be taken to task for not holding SCL management accountable for creating and sustaining effective management systems, including strategic and financial planning and risk management.

Much of the current financial crisis has been portrayed as a result of a lack of engagement by the City Council. However, we believe that the current financial crisis is largely the result of SCL senior management's practices, including not providing decision makers sufficient information to make fully informed decisions. In addition, SCL and the City Council share responsibility for the lack of engagement by the City Council.

When all is said and done, there is fault among all parties. However, SCL management must take the lion's share of the responsibility for the current state of the utility. We do not make this statement lightly and we believe the balance of this report supports this conclusion. The following is a summary of our findings and recommendations.

FINANCIAL/DEBT MANAGEMENT

Our overall conclusion is that SCL is in a difficult financial position, with $1.7 billion in long and short term debt, rates that have risen 58% in the last two years and are likely to stay high for the foreseeable future, and significant risks in returning to financial stability if the operations and maintenance (O&M) and capital budgets are not controlled. *Exhibits 1 to 4* in *Chapter II* show the debt growth, the impact on debt per customer, and the primary reason for the increased debt level, which was a policy of funding almost all capital programs with debt. A number of other key findings include:

- The rise in debt can be traced back to the City's policy decisions in the late 1980's and mid-1990's which loosened the financial policies regarding debt in an effort to keep rates as low as possible.

- Warnings by SCL's own financial analysts and City Council staff in the mid-1990's were ignored.
- The current financial model which is the basis for establishing rates has weaknesses that need to be addressed.
- Despite the current financial situation, SCL has not initiated the type of cost cutting one would expect from a utility aware of its poor financial condition.

While blame can be accorded to SCL management, the City Council and the Mayor for this long-term degradation of SCL's financial health, one must ask why SCL management did not argue for action when its own staff recognized impending problems six years ago. We reviewed thousands of pages of correspondence between SCL management and the City Council, during the period before the crisis, and did not find evidence that SCL management argued that more conservative financial policies were required. The City Council and Mayor may have not been fully engaged at all times, as SCL management states, and the elected officials may have wanted lower rates for political reasons; however, SCL management ultimately drives the financial process. SCL does the financial analysis, submits the budgets, recommends financing and requests changes in rates. City Councilmembers are not elected as utility experts; instead, they must be fully briefed by SCL and have confidence in the information they receive.

RISK MANAGEMENT

In reaching judgments on the quality of SCL's risk initiatives, we emphasize the evolutionary nature of the risk management function in today's utilities. Several years ago, the science of risk management, as now practiced in the utility industry, was virtually unknown to even the most sophisticated firms. Accordingly, we have placed most of the emphasis in our analysis on the momentum and trajectory that SCL has established in its risk management practices, the speed at which these practices have developed vis-à-vis the City's needs, and the degree to which SCL has positioned itself to move with the industry's changing demands and increasing expectations. We do not presume to judge SCL by the same standards as a large, established, sophisticated trading firm.

With this caveat in mind, we summarize our major risk management findings below.

- SCL management was prudent and forward thinking in establishing the Power Marketing Group (PMG).

- The power marketing and risk management functions at SCL, although generally meeting the utility's limited current needs, have a number of serious shortcomings that existed before and during the crisis and threaten the future.

- Although there is no question that risk-related activities could have and should have been managed better before and during the 2000-2001 energy crisis, there is no assurance that the consequences would have been substantially mitigated.

- The Risk Management Manual, a critically important document, is out of date, incorrect, inadequate, and poorly controlled. It is not serving the functions for which it is necessary and intended.

- It is essential that a risk management program include effective means for limiting losses, especially in times of market stress. SCL does not presently have suitable measures in place to define loss limits and to require appropriate management response when such limits are threatened. This was a root cause for some of the problems during the crisis and continues today.

- The City Council has serious risk management oversight responsibilities, but these are not adequately defined. Furthermore, the current working relationships between SCL and the City Council seriously impede, and perhaps preclude, Council's ability to faithfully discharge this responsibility.

- In addition to the programmatic elements of risk analysis that are required of the marketing organization, risk analysis must also play a critical role in strategic planning and other important decision-making functions. Despite what appear to be sufficient skills and tools in this area, SCL does not appear to effectively integrate risk analysis with its decision-making processes.

OPERATIONAL ANALYSIS

Our original work plan did not identify a separate operational analysis chapter. However, in order to complete the review of the financial plan and address issues related to risk management and governance, we found it necessary to review areas such as strategic, financial and operational planning, O&M and capital budgeting levels and decision methods, staffing levels, the impact of corporate culture on effectiveness, and finally the performance of the SCL senior management team. Each of these areas was analyzed using a diagnostic method that sampled information from key branches that were most related to the issues of concern. These results, while based on limited observations were adequate for preliminary judgments and general recommendations. Using this analysis and our experience on numerous other assignments, we developed a matrix that summarizes SCL's management rating for each area addressed. Details on this matrix are at the end of *Chapter IV*. The major findings from this analysis include:

- SCL's formal strategic plan has not been fully updated since 1996, despite efforts in 1997-1998.
- SCL's System Control Center prepares a broad range of performance metrics for use by management and the Distribution Branch, however, most of the results are not communicated outside of SCL.
- The current reliability of SCL's distribution system appears to be excellent based on available industry data.
- The O&M budget has been relatively level over the last few years with no major initiatives undertaken to determine the optimum budget level.

- SCL's capital budgeting process does not consistently utilize an adequate level of justification for approval of new projects in the long-term budget and financial model.
- Budgeted staffing at SCL has remained level for the last six years after reductions in the early 1990's. Further, a preliminary analysis shows it to be relatively high when compared to other large city electric utilities.
- The senior management team lacks in-depth utility management experience.
- SCL's senior management culture does not appear to be adequate for a utility facing the issues and problems identified in this report.
- SCL's senior management team, when measured against typical standards that utility management teams are expected to achieve, has a number of areas in which it must improve its performance. (A management scorecard can be reviewed in *Chapter IV*, Operational Assessment.)

GOVERNANCE

This chapter addresses questions regarding how well SCL is governed, governance alternatives, and the root cause of problems. Our overall conclusion is that the governance structure is not broken, it simply is not working because of the lack of communication and trust between the City Council, the Mayor and the management of SCL. Like the Mayor's City Light Review Committee that studied governance, we looked at alternate governance structures and were originally inclined to suggest alternatives. Ultimately, however, we concluded that the root cause is the problem with SCL management practices and its poor communications with the City Council. Changing the governance structure does not address these issues and raises other potential problems. Our basic findings were:

- Increased focus by elected officials on issues confronting SCL is needed.
- The governance process is missing a balanced voice from all stakeholders.
- The governance and oversight function is too dependent upon very limited City Council analytical resources.
- The influence of local politics has adversely affected the governance and oversight function.
- The governance and oversight function would benefit from additional clarity, quality, and formality in the communications between the City Council and SCL.
- The current governance process would benefit from increased use of board of director best practices.
- Authority and responsibilities for oversight of SCL do not always match.
- All governance models have strengths and weaknesses and the current model seems appropriate.

D. SUMMARY OF SPECIFIC RECOMMENDATIONS

Based on the findings in the report, we have developed many recommendations. Each is supported by one or more findings and in some cases we provide detailed implementation steps.

II-R1 Focus on and address the causes of SCL's long-term debt rather than being distracted by the abnormalities of the 2000-2001 energy crisis. (Refer to Findings II-F1 and II-F2.)

II-R2 Develop clearly stated strategic and tactical financial policies. (Refer to Findings II-F7 and II-F8.)

II-R3 Develop future financial policies that are more conservative than those currently in place. (Refer to Findings II-F8 and II-F9.)

II-R4 Modify SCL's current financial model so that it appropriately addresses the risks associated with wholesale power market sales and purchases. (Refer to Finding II-F9.)

II-R5 Perform additional analysis of financial results using alternative, less optimistic inputs of energy prices, water conditions, and capital requirements. (Refer to Finding II-F11.)

II-R6 Provide quarterly reports to the Mayor and the City Council on progress in meeting its financial goals. (Refer to Finding II-F11.)

II-R7 Implement a plan to reduce debt load, which will provide greater flexibility during a financial crisis. (Refer to Finding II-F13.)

III-R1 Revisit the August 2000 Deloitte & Touche audit of the Power Marketing Group (PMG) to examine all of the findings (as opposed to only those in selected sections or those with certain priorities) and phase in improvements when and if they become appropriate. (Refer to Finding III-F4.)

III-R2 Enhance PMG's employee development initiatives through a formal, aggressive program including ongoing training and improved opportunities for personnel to interface with their peers in the marketplace. This must also include the necessary budgetary support. (Refer to Finding III-F8.)

III-R3 Develop a long-term software plan that addresses today's weaknesses and anticipates future needs. This plan should address the specific concerns expressed in the Deloitte & Touche audit and identify cost-effective software tools. (Refer to Finding III-F11.)

III-R4 Review the level of information technology resources made available to the PMG and add resources when and where appropriate as part of the long-term software plan. In addition, a more effective process for requesting and implementing software improvements should be considered. (Refer to Finding III-F11.)

III-R5 Reach out to stakeholders to provide a clearer picture of PMG's roles, capabilities, processes, and accomplishments. This will include more open communication, simpler and clearer displays of information, rigorously honest assessments (for better or worse), and a generally positive and healthy working relationship. (Refer to Finding III-F13.)

III-R6 Provide a higher degree of analytical support for its chosen strategies. To the extent substantive analysis is already taking place, it should be more visible. In addition, the analytical basis, including any optimization studies and risk analysis, should accompany all key decisions. (Refer to Finding III-F16.)

III-R7 Incorporate enhanced discussion of cost and risk trade-offs between SCL and the City Council as part of their decision-making activities. (Refer to Finding III-F18.)

III-R8 Update and upgrade the Risk Management Manual and take steps to reestablish the manual's role, authority, and credibility. (Refer to Finding III-F19.)

III-R9 Move promptly to establish a loss-limiting process including the institutional changes to make it successful such as authorizing budget flexibility, defining the role of City Council, and instituting measures to ensure that SCL and the City Council are willing and able to be bound by the process. (Refer to Findings III-F20 and II-F21.)

III-R10 Conduct a limited workshop, perhaps one day long, for the City Council in which fundamental concepts of risk and its management in the power markets are covered. An annual update of perhaps a few hours should also be held to advise Council of then-current trends in the industry and their potential impact on SCL. (Refer to Findings III-F1 and III-F24.)

III-R11 Establish a limited set of documents that govern the risk management program which are clearly defined as subject to approval and periodic review by the City Council. The emphasis should be on policy matters and not procedural details. The danger of "burying" the Council is real here, and the parties must agree on what is really important as well as the most efficient vehicle for obtaining Council approval. (Refer to Finding III-F24 and Recommendation III-R13.)

III-R12 The City Council needs to increase its sensitivity to risk considerations when making decisions related to SCL. The actions of Council can directly impact the utility's risk positions, and such actions should not be undertaken without suitable analysis and communication with SCL. (Refer to Finding III-F26.)

III-R13 Develop reports and processes that allow the City Council to effectively meet its oversight objectives. SCL and Council, perhaps with the facilitation of a consultant, should work together to address the need for appropriate information flow. (Refer to Findings III-F26and III-F28.)

III-R14 Establish a structured process for decision-making, including strategic planning, which routinely incorporates risk analysis. Risk should be included as an element of discussion in all important decisions concerning SCL, especially those presented to the City Council. (Refer to Finding III-F29.)

III-R15 SCL should become much more aggressive in analyzing the lessons learned from the 2000-2001 energy crisis and implementing corrective measures. (Refer to Finding III-F32.)

IV-R1 Develop a long-term strategic plan that clearly defines the wants of SCL's customers, identifies the potential costs of implementation, and establishes clear, concise, and attainable targets for each SCL branch. (Refer to Finding IV-F1.)

IV-R2 Review the performance metrics available for all branches and if necessary develop new ones. These metrics should be available at all times to SCL employees and provided on a regular basis to the City Council and the Mayor. (Refer to Findings IV-F2 and IV-F3)

IV-R3 Conduct a detailed analysis of the Operations and Maintenance Budget and the Capital Improvement Plan to determine optimal levels and options for future financial planning. (Refer to Findings IV-F4 and IV-F5.)

IV-R4 Develop or purchase financial analysis tools for determining the necessity and justification of capital projects, and use them to analyze future capital budgets. (Refer to Finding IV-F6.)

IV-R5 Review the rules for payments of capacity additions by developers to ensure that the policy intent is being fulfilled. (Refer to Finding IV-F7.)

IV-R6 Conduct a comprehensive analysis of SCL staffing. (Refer to Finding IV-F8.)

IV-R7 Continue efforts to increase the level of utility expertise within SCL's senior management ranks. (Refer to Finding IV-F9.)

IV-R8 The City Council and Mayor should ensure that SCL's management deficiencies are corrected. (Refer to Finding IV-F10 and IV-F11.)

V-R1 Increase the focus of the City Council on SCL's needs. (Refer to Finding V-F1.)

V-R2 Seek out and encourage the active participation of all stakeholders. (Refer to Finding V-F2)

V-R3 Increase the resources at the disposal of the City Council for the critical review and analysis of SCL's proposals and initiatives. (Refer to Finding V-F3.)

V-R4 Consider the formation of an Office of Utility Oversight to assist with the City Council's governance and oversight function. (Refer to Finding V-F3.)

V-R5 Mitigate the negative effects of undue influence of local politics by implementing Recommendations IV-R1, V-R2, R3, R4. (Refer to Finding V-F4.)

V-R6 Improve the quality, clarity, and formality of communications between the City Council and SCL in order to clarify the Council's expectations, and distinguish the respective roles of the Mayor, Council, and SCL in the governance and oversight process. (Refer to Finding V-F5.)

V-R7 Incorporate board of directors best practices into every day activities of the City Council and SCL**.** (Refer to Finding V-F6.)

V-R8 Align responsibility and authority related to governance of SCL through increased cooperation between the City Council and the executive branch. (Refer to Finding V-F7.)

V-R9 Maintain the current governance structure**.** (Refer to Finding V-F7.)

II. ASSESSMENT OF CITY LIGHT'S DEBT/FINANCIAL SITUATION

A. SUMMARY OF MAJOR FINDINGS

SCL's current debt is primarily the result of a series of decisions made in the 1990's which when combined, created an enormous debt load for SCL. Though some analysts had raised concerns in the mid-1990's about the debt load, those concerns were never acted upon. Instead, decision-makers decided to increase the debt load rather than increase rates or reduce operating costs.

SCL's current financial practices are not adequate for managing a large-scale utility, particularly in an era of price volatility and industry deregulation. There are problems concerning SCL's strategic (overriding goals and objectives) and tactical (tools used) policies, which, if addressed, should help ensure the long-term financial health of SCL. The financial model is an example of a tactical tool that could benefit from explicit ties to the strategic policy. We have also concluded that SCL's assumptions are probably too optimistic to maintain acceptable levels of financial risk.

The energy crisis of 2000-2001 exacerbated SCL's financial problems, but it did not create them. Given the circumstances that decision-makers placed themselves in by 2000, they handled the crisis as best they could. A crucial factor in lessening the blow of the energy crisis was the City Council's willingness to raise rates when needed, and this will continue to be a significant factor affecting SCL's bond rating.

B. SCL DEBT GROWTH OVER THE YEARS

II-F1 SCL's debt grew before the energy crisis as a result of policy decisions made during previous decades.

The "Perfect Storm" analogy has been used by SCL senior management to describe the events that led to SCL's heavy debt load, yet its debt has been growing at a significant rate for years. Before the energy crisis, SCL analysts and others in city government, raised concerns about the need to control debt and the increasing reliance on debt to fund a high percentage of capital projects. For example, in 1994 a task force, formed to address SCL financial polices, stated:

> *"Since 1989 we have implemented a number of changes in our financial and accounting practices, each of which has been justified in its own terms, but all of which have had the effect of increasing the amount of financing we raise through our borrowing program and decreasing the amount raised from rates."*[1]

[1] Memorandum, March 11, 1994 Financial Policies for Seattle City Light, pg 3.

The task force also stated that risk and uncertainty were increasing:

> *"At a time when City Light, in common with the entire utility industry, is facing increasing risk and uncertainly in its general operating environment, we felt that it is prudent to limit the financial exposure inherent in our increasing debt burden."*

In 1996, SCL noted that to be competitive it would need to manage and control debt by expensing more of the Capital Improvement Program (CIP) including data processing systems and furniture.[2]

CAUSES OF INCREASED DEBT

Specific policy decisions made over the previous decade that contributed to the growing debt included:

- Coverage Ratios - In January 1990 the City Council revised the then existing SCL financial policy to require only 1.8 debt service coverage instead of the 2.0 which had been in effect.[3]

- Second lien debt - In 1990 SCL issued variable rate debt for the first time. This debt was issued as second-lien[4] debt making it subordinate to other long-term debt. The City decided that the interest on these variable rate bonds should not be included in the debt service coverage ratio (which had just been reduced to 1.8).

- Capitalization Policy - In 1992 SCL began capitalizing a number of costs which previously had been expensed (i.e., "paying as you go"). These included computer hardware, software and development, Administration & General (A&G), and furniture and fixtures. Beginning in 1991, SCL allocated $8.3 million of such costs to capital. In 1993 SCL developed and began using new guidelines for capitalizing system development costs. In 1998, $14.9 million in A&G was capitalized which represented 28% of total A&G. In 1999 SCL changed the financing for replacement of non-specialized vehicles from a lease program to being funded by debt.

- Conservation Program Treatment - During the 1995-1996 rate setting process the City Council directed that the Conservation Program should be included in the A&G CIP allocation. Since 1995, SCL has included these costs in the allocation.

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[2] Elements of a 1996 Work plan for City Light, Item 2 (by Councilmember Margaret Pageler, Chair, Utilities and Environmental Management Committee).
[3] The Debt Service Coverage ratio is the revenue available for debt service divided by debt service. It is an indicator of an organization's ability to pay its overall debts.
[4] Also commonly referred to as second tier or subordinate debt.

- Interest and Principal Deferral – SCL's long-term debt includes deferred payments for capitalized interest (interest included in bond issues) as well as principal.[5] SCL routinely structures bond issues to be interest only for the first three to five years. Although neither of these practices is unusual, they contribute to the build-up of SCL's debt.

- Capitalization of Short-lived Assets - There are also implications for the matching of expenses with the life of the underlying asset. As noted earlier, SCL capitalizes a number of A&G, computer system and vehicle costs. Some of these assets have useful and accounting lives far shorter than the 25 year terms of the bonds used to finance them and, in some cases, may have depreciated before principal payments begin. SCL argues that other assets, such as Transmission and Distribution upgrades, have lives of 30-50 years thereby producing a blending of asset lives, which is longer term.

- High Ross Dam Deferral – City Light makes annual payments to the Government of British Columbia of $21.8 million under the High Ross Contract which began in 1986. In setting rates for the 2000-2002 period in November 1999, the City Council decided to recognize the debt service portion of the annual High Ross payment as an expense over the period through 2035, rather than through 2020, essentially spreading out the recognition of payments over an additional 15 years. This meant that beginning in 2000, $12.7 million of the debt service portion of the annual payment to British Columbia is recognized as an expense and is included in revenue requirements. However, since City Light was still required to make the full annual payment of $21.8 million, the $9.1 million that is not recovered through rates must come from borrowed funds and be repaid by future ratepayers.

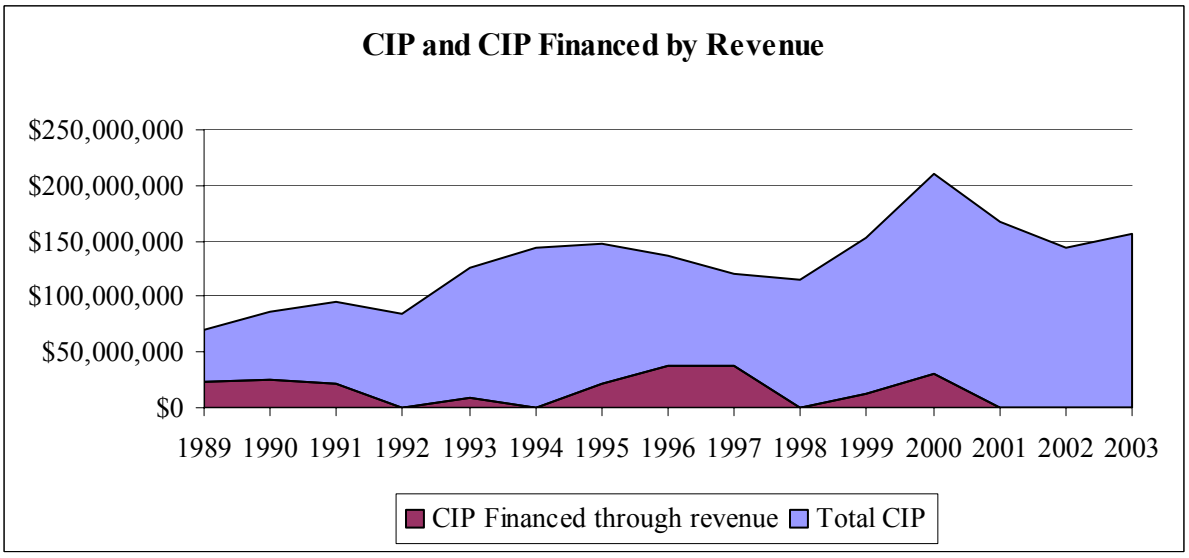
- Growth in Capital Programs - Growth in CIP directly drives financing requirements and thus debt. SCL's annual CIP grew from $57 million in 1989 to over $120 million in 2000 with several years of much higher spending over that period.

None of these actions individually would have a profound effect on the debt level. However, cumulatively they resulted in a continuous upward trend in debt that ultimately reached over $1.7 billion.[6]

[5] Interest payments on the recent $503,700,000 Revenue Bonds issued March 15, 2001, begin March 1, 2004.
[6] Including first and second lien long-term debt, Revenue Anticipation Notes (RANs), and funds borrowed from the City's cash pool.

As seen in the chart below, the consequences of these debt policy decisions can be seen in the decreasing amount of SCL's capital costs that were paid for by current revenues. Debt as a percentage of capitalization has risen from less than 60% at the end of 1990 to over 72% at the end of 1999. Current SCL projections show that debt as a percentage of total capitalization will rise to 85% before stabilizing and declining.

Exhibit II- 1

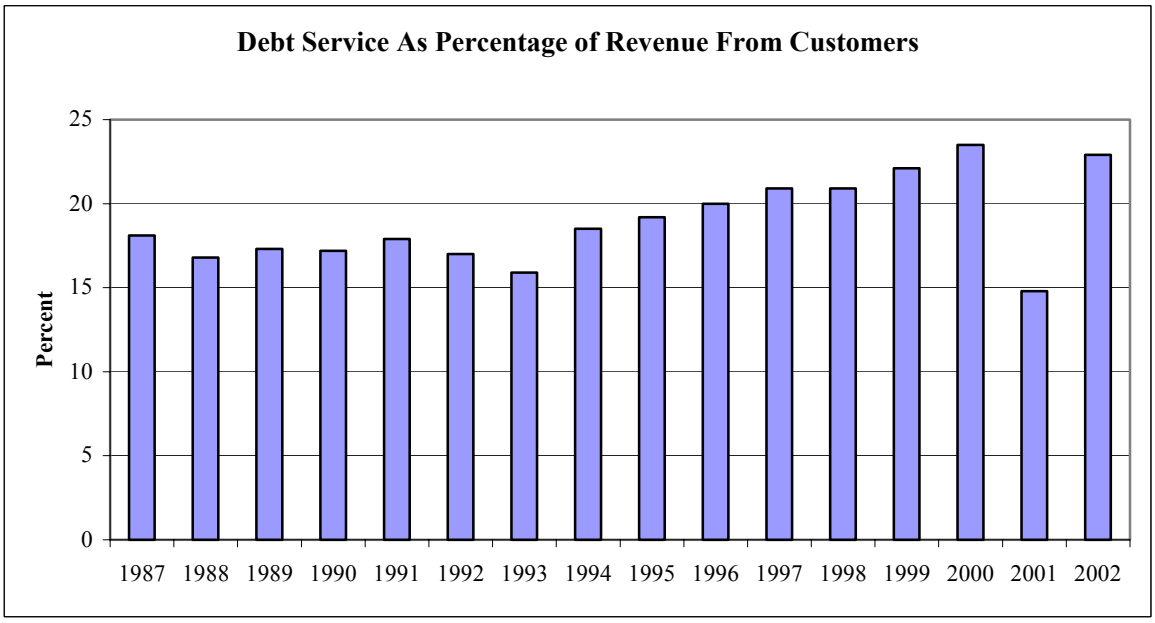


In summary, the current level of debt was built up over many years during a less volatile period when rates were lower. A number of decisions contributed to the level of debt.

IMPACT ON CUSTOMERS

More of SCL's current rate revenue is going to pay debt than in the past, but not as much as would be expected from the large increase in the amount of debt. This is partially due to SCL's diligence in monitoring rates and refinancing when rates dropped (as allowed by bond covenants). The general decline of interest rates during the last ten years has been an enormous benefit to highly capitalized industries such as electric utilities. In addition, utilities can raise rates as needed to meet financial requirements including debt service.

Exhibit II- 2

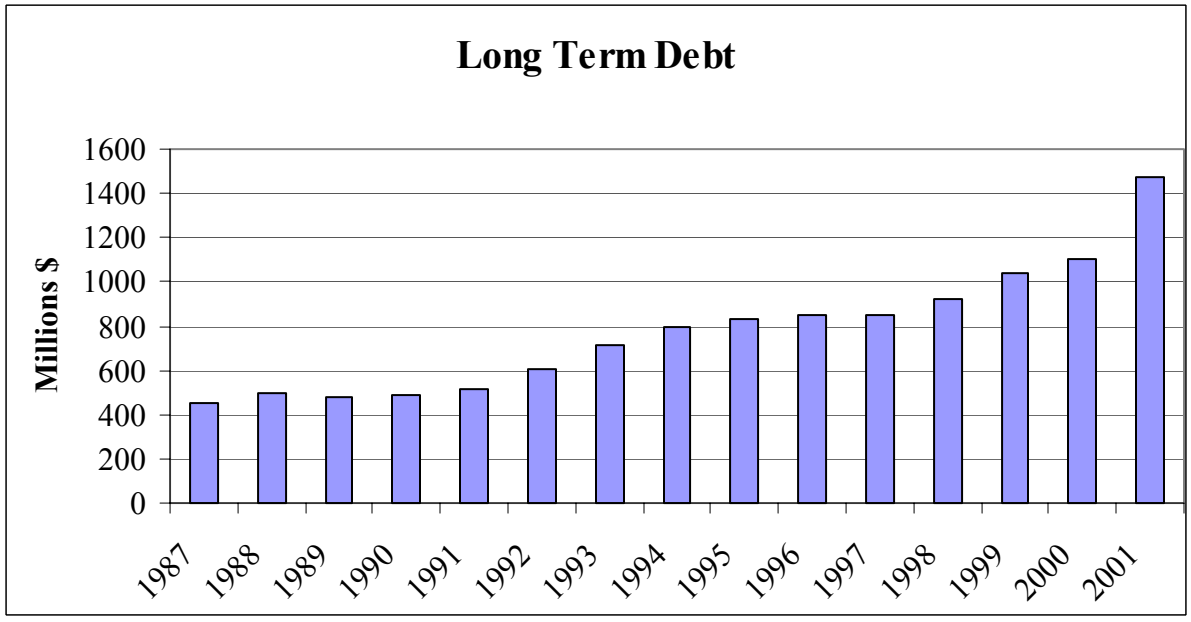


Even with rate adjustments, the percentage of revenues used for debt service has climbed from the relatively stable levels of the late 1980's and early 1990's. Note that interest was deferred in 2001 while at the same time rate increases went into effect. As a result, 2001 appears as an unusually low percentage.

From 1987 to 2000, SCL's long-term debt increased from slightly over $400 million to over $1.1 billion dollars. This was despite the fact that SCL avoided the WPPSS financial disaster which affected many Northwest utilities.[7] While the additional debt in 2000-2001 certainly increased the debt load, the trend of an increasing debt load occurred well before 2000. The debt run up was consistent over time and mostly occurred prior to the start of the 2000-2001 energy crisis. The following chart shows the increase in long-term debt over this period.[8]

[7] SCL was, of course, indirectly affected due to BPA price increases.
[8] Source: File Bond Summary A.xls provided by SCL.

Exhibit II- 3



It is difficult to estimate how much of SCL's "new" debt of $600 million should be attributed to the 2000-2001 energy crisis, but we believe about $250-$300 million of the debt could be tied to the crisis. SCL believes this number to be somewhat higher but agrees that while the crisis had a profound impact on overall debt levels, debt had grown significantly prior to the crisis.[9]

Another important indicator is the magnitude of debt increases per customer adjusted for and inflation. This is shown in the following chart.

[9] Source: SCL response of 10/25/02.

Exhibit II- 4

By 2000, before the crisis, adjusted debt per customer was at a level over one and one-half times that of 1991. By 2001, inflation adjusted debt per customer was nearly double the 1991 level.

The debt level cannot be quickly reduced, and controlling it in the future will require a series of very specific actions, such as:

- Increased scrutiny and control of the CIP budget.
- Increased scrutiny and control of the O&M budget.
- Establishment of a corporate mission statement that has a strong focus on financial performance.

II-F2 Before the 2000-2001 energy crisis, analysts had identified SCL's substantial debt load as a matter of concern, but it was not addressed.

Concerns about the increasing reliance on debt had been expressed for years both inside City government and by outside government and industry experts. Most recently this concern had been expressed by bond rating agencies and outside experts who noted that deregulation had introduced greater volatility and uncertainty into the energy market which, in turn, would require utilities' to accumulate greater cash cushions.[10] Our

[10] Senior SCL officials noted that rating agencies, as late as 1999, reaffirmed SCL's AA bond rating. Source SCL response of 10/25/02.

experience indicates that most public utilities have tried to reduce debt in recent years in order to prepare for a more competitive industry.

Blaming the long-term debt level on the energy crisis[11]would be misdirected and deflect the needed focus on the long-term policy decisions that led to the majority of the debt.[12]

II-R1 Focus on and address the causes of SCL's long-term debt rather than being distracted by the abnormalities of the 2000-2001 energy crisis. (Refer to Findings II-F1 and II-F2.)

SCL management and City officials should put aside the argument over whether SCL's debt was a result of a "Perfect Storm" situation caused primarily by the energy crisis and drought. Instead, they should establish prudent policies and work toward reducing the CIP and O&M expenditure levels relative to revenue. Chapter IV addresses a number of operational issues related to this recommendation.

C. FINANCIAL POLICIES AND PRACTICES

There are two significant levels of financial policy that influence the usage of debt by SCL. The first is a higher level, philosophical or strategic policy that deals with where and how debt fits within the overall strategic goals of the utility, local government, and ratepayers. The second level is the tactical policies that specify the tools used to carry out the strategic policy.

Our analysis shows a number of flaws in SCL's current strategic and tactical financial policies:

- SCL strategic and tactical financial policies are not captured in one place, are not well-defined, and are often unwritten.
- They are not coordinated to ensure that they are balanced and not at cross-purposes.
- They have not all been thoroughly analyzed to ensure that the costs and benefits are fully understood by decision-makers.
- Finally, they have not been properly communicated to the citizens and ratepayers.

Consequently, decisions have been made on an ad-hoc basis that run counter to goals such as maintaining low rates and the highest bond rating. Well-defined and communicated policies may not by and of themselves have changed SCL's current debt picture. Yet, it is certainly questionable whether citizens would have agreed with policies that in effect pushed so many costs into the future. Ratepayers may not understand all the complexities

[11] In our interviews with SCL officials, none of them suggested that the debt was driven by the crisis any more than actual numbers suggest.
[12] For example, during the 1990s while debt was increasing, inflation-adjusted average electric rates declined by 15 percent.

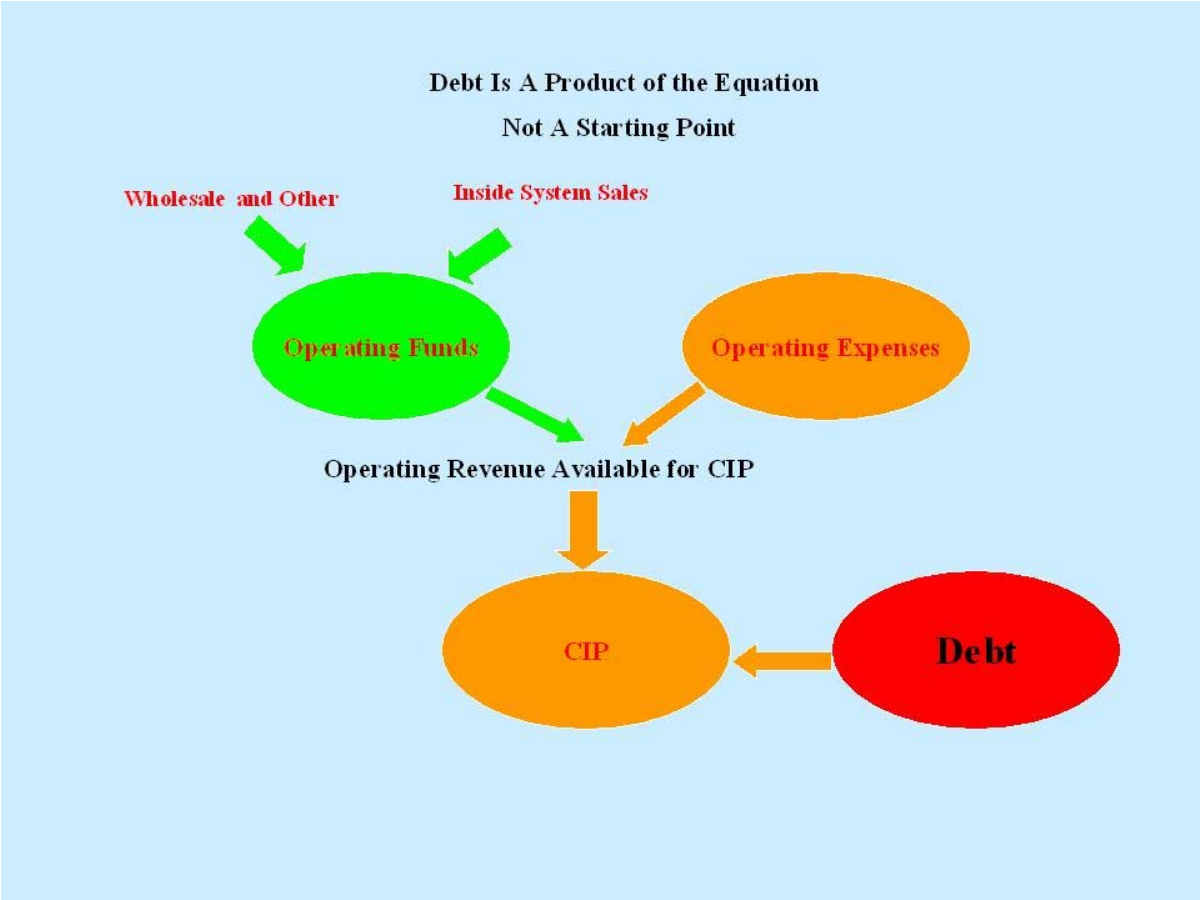
of rate making, but they certainly understand the problems of using debt to pay tomorrow what could be paid today.

STRATEGIC POLICIES

II-F3 Strategic policies are not sufficiently thought out or documented.

Strategic financial policies concerning debt deal with such issues as tolerance for debt, goals concerning financial ratings, and how debt is to be used in the overall financial structure of the utility. Strategic policy is critical because although debt is often looked upon as an independent focal point, in reality it is merely the product of the financial equation of revenue, expenses and capital. The graph below attempts to illustrate what is actually a fairly simple equation. Revenue from power sales both inside and outside the utility goes to cover power costs, operating costs, taxes, debt service, and miscellaneous short-term expenses. The remainder, if any, is available for capital projects. Funding for capital projects not provided by current revenues must be provided by new debt. SCL can vary any of the numbers in the equation but the outcome is the same. Debt must be used to fund capital which is not provided by revenue. Our point is that SCL cannot merely address debt by itself. Rates must go up and or expenses and capital spending must go down if debt is to be reduced on a relative basis.

Exhibit II- 5



There are numerous variables and decisions that take place before the issuance of debt which are also the direct cause of debt. These are strategic decisions dealing with rates, spending, and power supply, not tactical measures such as debt service ratios.

II-F4 SCL's current strategic financial policies are not adequate for managing a large-scale utility particularly in an era of price volatility and electric industry restructuring and deregulation.

There is no City Council statement in resolution form that addresses the overall strategic debt policy of SCL. Such strategies have tremendous implications on debt. There is a great deal of anecdotal evidence, issue papers, workshops, and briefings in SCL's history that indicate much of the debt which it carries today was the result of strategic decisions to increase debt or at least allow it to rise. These strategic decisions include:

- SCL can borrow at a lower rate than its customers; therefore, SCL should in effect carry their debt by keeping rates low and borrowing.

- SCL desired to have the lowest electric rates among the 25 largest U.S. cities.
- Current ratepayers should not pay immediately for capital improvements that have long lives; instead, the improvements should be amortized.
- Debt payments should be level over the term of the loan by paying interest only on bonds for the first five years; and
- Second lien (subordinate) debt should be used and the payments should not enter into SCL's debt to equity calculations.

II-F5 <u>The City's stance towards its bond ratings is an important strategic policy that should be well thought out and documented.</u>

The willingness of City Council to raise rates was, and remains, a significant factor in SCL being able to borrow in the financial markets. It is apparent that SCL and the City Council have spent considerable time over the years attempting to understand how actions regarding rates and debt would affect SCL's credit rating. To the credit of the City Council and SCL, before major decisions are made about SCL, rating agencies and financial experts are often consulted and asked to make presentations.

There are no criteria regarding debt/equity, debt service coverage, debt/revenue, etc., that the bond rating agencies look to solely when rating bonds. These metrics are certainly considered and general guidelines (which we discuss below) can be found, but other less tangible factors are also considered. These less tangible factors include overall risk (from weather, short exposure, long exposure, licensing renewal, etc.), strength of the management team, willingness and ability of the utility to adjust rates, rate stabilization funds, fuel adjustment clauses, and economic strength of the market.

Until 2000-2001, SCL maintained stable debt ratings despite the increases in its debt. This period of stable credit ratings finally ended due to increased debt load and the general concerns surrounding the electric industry in the West.

- On January 25, 2001, Standard & Poors (S&P) reduced SCL to AA- negative outlook from AA –Stable.
- On March 13, 2001, SCL was placed on CreditWatch with negative implications as a result of the operating deficits that were to be funded through additional borrowing. SCL was later downgraded to A+ negative.
- Moody's also downgraded SCL in 2001 to Aa3. SCL had held a higher Aa rating since 1978.[13]

During the crisis of 2000-2001, by agreeing to raise rates, the City Council showed it was willing to take necessary actions. This willingness to approve rate increases, as the magnitude of the financial shortfall became apparent, prevented even more debt from being

[13] Although any reduction in ratings is a cause for concern, the current SCL ratings still reflect a relatively high degree of confidence by the rating agencies.

incurred, and perhaps avoided additional ratings downgrades.[14] This can be contrasted with other utilities, whose state regulatory commissions set rates. For example, the Nevada Public Service Commission only permitted recovery of about one-half of Nevada Power's $900 million energy crisis over-runs . This led to acute financial problems for Nevada Power.

TACTICAL POLICIES

II-F6 SCL's tactical financial policies are not tied to its strategic policies.

Most of SCL's written financial policies are in the category of tactical financial policies rather than strategic policies. "Tactical policy" is a term of convenience used to describe the tools or metrics used to measure and implement financial strategies. Examples of the metrics typically used are debt service coverage ratios, debt to equity ratios, and percent of capital funded by debt. SCL's tactical policies are not sufficiently related to its strategic goals, are not written, and are not accessible to ensure that everyone is aware of them and understands their relationship to the strategic goals. For example, regarding the tactical debt tools, nowhere is there a statement in SCL's financial policies addressing debt service coverage, the reserve funds, treatment of capitalized expense items, etc. Instead, these policies are found in various resolutions and presentations[15], but SCL does not have an integrated, consolidated statement of these policies available to the staff executing the decisions. Most utilities have not only clearly defined financial policies and goals but make a point of displaying them in annual reports, on web sites, and in public communications.

An important tactical tool is the debt service coverage ratio.[16] It is a commonly used metric that has been and continues to be used by SCL. Before 1990, SCL had a financial policy that required rates be set at a level that would be expected to provide debt service coverage of 2.0 times debt.[17] In 1990, the City Council adopted, through Resolution 28085, a policy to reduce this coverage ratio to 1.8 times debt. At the same time, a policy was instituted that required rates to be set at an 80 percent confidence level to yield positive revenue during average water years. At this time (the end of 1989) debt equaled $431 million and debt represented approximately 60% of total capitalization.

In addition to the debt service coverage ratio, other tactical practices and unwritten guidelines included:

- Second lien debt is limited to 15% of first lien debt (This is actually required through bond covenants).
- 2nd lien debt service (subordinate debt) is not considered in the debt service calculations.
- Long-term debt is typically structured as interest only for the first five years.

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[14] As noted in this chapter, bond ratings are highly subjective, and it is impossible to determine if a downgrade would have occurred.
[15] See Resolution 30428.
[16] Debt service coverage is actually a simple calculation, but it is often used as a metric as well.
[17] Revenue available for debt service divided by debt service.

These policies remained in effect until 2001 when they were modified by new policies adopted through a City Council resolution. These new policies stated that rates would be set to provide net revenues available to fund capital requirements such that they will be positive with a probability of at least 95 percent during dry water years[18]. This approach was taken to ensure that SCL would have minimal cash reserves, even during years when precipitation and wholesale system sales were below expectations.

The new rate setting guideline does not specifically address debt or debt coverage, although it is implicit in the 95 percent probability. The resolution also adopts a Contingency Reserve Account of $25 million. However, the Contingency Reserve Account will not be funded until all short-term debt is repaid, including the Revenue Anticipation Notes (RANs), and operating cash balances have reached $30 million. At the time of the resolution, it was expected that SCL would begin funding the account in January 2004. [19]

II-F7 SCL has little or no margin of error left in its financial strategy.

One of the uses of debt is as a cushion in times of financial distress. By incurring additional debt during such times, a utility can spread out or even eliminate the need for a rate increase.[20]When finances return to a more normal condition, the incremental debt can be repaid.

SCL has absorbed debt increases into its permanent capital structure rather than paying down debt during normal or prosperous years. Further, SCL has no contingency fund to absorb shortfalls. As a result, any shortfalls must be absorbed directly through rates, debt, or capital reductions. If debt is the option, SCL runs an increased risk of credit downgrades with resulting higher borrowing costs.

II-R2 Develop clearly stated strategic and tactical financial policies. (Refer to Findings II-F7 and II-F8.)

SCL needs to develop formal policies concerning both strategic and tactical use of debt and ensure that all adopted polices are thoroughly analyzed and tested. At the highest level these would begin with a vision or mission statement and progress through more defined objectives such as the tactical tools. Strategic issues that need to be addressed include:

- Bond ratings (such as the willingness to accept downgrades in ratings and the associated increase in borrowing costs).
- Ranking among peers and at what cost (such as setting a goal that SCL's rates be in the lowest quartile of 25 major US cities).
- Social agenda (addressing real economic costs of environmental and social equity goals).

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[18] This does not mean that all CIP will be funded through revenue, only that some dollar amount will be available.
[19] The Contingency Reserve Account is to be funded by $12.5 million per year to be designed into SCL's revenue requirement.
[20] If other actions are taken, such as reducing expenditures.

- Debt policy (where and how debt fits within overall strategic goals of the utility, local government, and rate payers).

On a tactical level, issues that need to be addressed include:

- Debt service coverage ratios and whether to reapply this standard in addition to the probability method of rate setting adopted in Resolution 30428.
- Whether to include all debt service costs in the debt service coverage metric if it is readopted, or how to account for these costs in a transparent manner.
- Whether limits should be placed on the amount of A&G, Information Technology (IT) and other expenses that can be allocated to capital.

We believe SCL's financial policies should be reviewed as soon as possible rather than waiting for the triggers specified in Resolution 30428 (adopted December 2001).

II-F8 Further liberalization of financial policies should be avoided because it could result in more relative debt.

Standard and Poors (S&P)stated that they will be watching to see whether utilities restate indentures and loosen covenants and reserve requirements.[21] S&P noted that no utilities have been downgraded for merely restating their debt service requirements. However, a utility's bond rating was downgraded because of diminished coverage ratios after restating indentures. [22]

Moody's bond rating agency, while hesitating to recommend specific financial goals, noted that the median debt service coverage for the 25 largest U.S. municipal utilities was in excess of two times debt service. Moody's also pointed out the value of liquidity in the form of cash reserves.[23] While SCL plans to develop additional liquidity reserves, it will not achieve this objective for a number of years.

II-R3 Develop future financial policies that are more conservative than those currently in place. (Refer to Findings II-F8 and II-F9.)

SCL needs, at a minimum, to adopt additional criteria concerning the amount and types of capital expenses that can be financed with long-term debt. A criterion of 50/50 or 60/40(60 percent debt, 40 percent current revenues) is common among peers. Additionally, assets

[21] Public Power Comes off Mixed 2001, Looks ahead to 2002. S&P Ratings Digest, February 8,2002.
[22] Modesto Irrigation District was downgraded after debt coverage sank to 1.1, the minimum allowed under new, more permissive convenience. See Public Power Comes off Mixed 2001, Looks ahead to 2002. S&P Ratings Digest, February 8,2002.
[23] Presentation to the Seattle City Council On Electric Utility Financial Policies by Dan Aschenbach. SVP Moody's Investor Service, November 15, 2001.

with lives shorter than some limit to be established (five years is a suggestion) should be removed from the calculation before applying the 50/50 or 60/40 criterion.[24]

Additionally, the reserve fund needs to be reevaluated and adjusted upward to at least the $50 million dollar level originally proposed by SCL. Even this figure may require upward adjustment as SCL develops a better understanding of the expense implications of its Bonneville Power Administration (BPA) SLICE contract.

As the chart below shows, a recent review of the projected CIP and changes from last year's CIP show the progress being made at SCL in addressing debt by reducing the CIP.

Exhibit II- 6
Comparison of 2002 versus 2003 CIP Budget (in millions)

Year	2002-07 Projection	2003-08 Projection	Difference
2001	160.5		
2002	147.0	145.2	
2003	158.3	128.9	(29.4)
2004	155.5	124.4	(31.0)
2005	166.2	134.0	(32.2)
2006	165.0	142.6	(22.4)
2007	154.1	129.6	(24.5)
2008		124.9	
Total	1,107	929.7	
Six Year CIP	946.0	784.5	

FINANCIAL MODEL

SCL has a very sophisticated financial planning model. The model can project financial results using numerous combinations of load, supply, conservation goals, water conditions, and market prices. All of the variables are included in financial spreadsheets, which can be used for analysis and rate setting. The model's inputs (such as load, power purchase costs, CIP, etc.) come from SCL branches.

[24] SCL financial policies as defined in Resolution 30428 and elsewhere will, when implemented, produce projected debt service coverage on first lien debt of greater than 2.1, and CIP funded by debt of approximately 50 percent. Source: SCL response of 10/25/02 based on SCL projections.

II-F9 SCL's financial policies do not adequately address the financial risks associated with off-system sales and purchases.

Currently, SCL has significant market risk that needs to be addressed. This risk arose in the late 1990's when SCL became net short of capacity after selling its share of the Centralia power plant. This market risk continues today because SCL has excess capacity due to its purchase of power from the Stateline Wind project. The following exhibit shows how SCL's wholesale power market sales have increased in recent years. SCL's financial policies need to address the financial risk that will be introduced as SCL becomes increasingly a net seller of power.

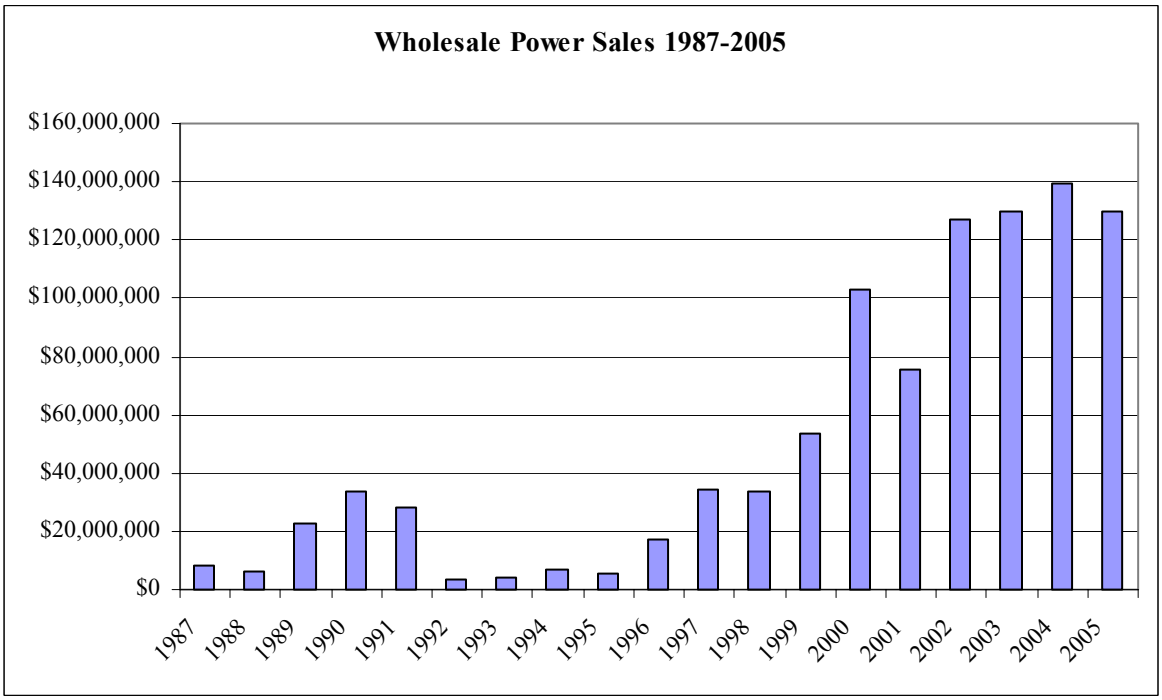
The BPA SLICE presents SCL with an opportunity to become a net seller of power. Yet, this opportunity is not without risk in the financial markets and needs to be accompanied by financial policies that recognize the risk. S&P states:

> "*Standard and Poors expects public utilities assuming additional risks (*such as SLICE*) to bolster financial performance to levels commensurate with increased risk if they wish to maintain credit quality. Key ratios include equity-to-assets, liquidity (perhaps supplemented by lines of credit and other fixed instruments), coverage of debt service, and coverage of fixed charges*"[25]

The extent to which outside sales will affect SCL's future financial performance is very significant due to its increased exposure to hydro risk and the variability in market prices. The following chart shows the actual and projected outside sales revenue from 1987-2005. SCL has stated correctly that, currently, with its ownership of excess generation, the boundary of risk can now be more accurately calculated because its power costs are known and the absolute downside to market prices is finite (i.e., zero).

[25] Public Power Comes off Mixed 2001, Looks ahead to 2002. S&P Ratings Digest, February 8,2002. Pg. 5.

Exhibit II- 7



II-R4 Modify SCL's current financial model so that it appropriately addresses the risk associated with wholesale power market sales and purchases. (Refer to Finding II-F9.)

The inputs and results of the financial model must take into account SCL's risk management policies. Furthermore, when developing financial forecasts, the impact of wholesale market sales must be fully communicated to decision makers.

II-F10 The financial model's results may be leading to overly optimistic views of future rate reductions and debt control.

The SCL financial model is a fine planning and analysis tool. However, it is only as good as the assumptions used in its analysis. As we have noted here and in other chapters, there are a number of variables faced by SCL that could lead to significantly worse financial results than what is currently used in the model.

Notable among the uncertainties are:[26]

[26] Order does not reflect potential impact or priority.

- Repayment of costs associated with the Alaskan Way Viaduct and Monorail projects.
- O&M costs related to the BPA SLICE.
- General uncertainty regarding BPA.
- Market prices for power sales.
- Boundary Dam re-licensing.
- Failure to recognize unplanned capital expenditures in the years 2005 and beyond.

Two current non-controllable events are having an impact. One area of major significance and uncertainty is that of precipitation or lack thereof. The Northwest has been in and remains in a low water condition. It is our understanding that the model assumes a return to more normal water conditions. Yet, recent forecasts indicate that this winter may produce even more water shortages. The most recent National Weather Service forecast states:

> *"… The odds tilt toward minimal relief for water shortages in the Northwest, northern Rockies, and Great Basin, with even a good chance for drought expansion in the Northwest."*[27]

Within the mechanics of the model, a low water year early in the 2002-2020 period is very significant because the impact carries forward and threatens planned repayment of debt and reduction of rates in the 2005 timeframe.

The second major financial impact is due to depressed market prices in the Northwest. SCL's long position requires that it sell its excess energy at market prices. The current prices are resulting in revenues well below expectations. SCL, in recent documents, indicated that for every dollar reduction in price per megawatt hour that SCL assumed in its budget, it loses $ 4 million in revenue that year

II-F11 SCL's financial model may be too optimistic in its assumptions regarding the full reimbursement of costs for some potential high profile projects.

SCL anticipates significant expenditures over the 2003-2008 period for two potential high profile projects (the Alaskan Way Viaduct and the Monorail) for which full reimbursement is being assumed in the financial model. The reimbursement would come from project related bonds in both cases, but at this time the funding is not assured. Since bonds established by local government agencies would reimburse the projects, the money arguably comes from the same entity that sets rates. Therefore, if SCL is not reimbursed, it must either absorb the costs through debt or increase rates.

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[27] National Weather Service, Northwest River Forecast Center, http://www.nwrfc.noaa.gov/cgi-bin/r_fcst .

SCL's CIP budget assumes the following levels of expenditures for the Monorail and Alaskan Way Viaduct projects:

Monorail and Viaduct Costs included in Financial Model (in thousands)		
	Monorail	Alaskan Way Viaduct
2003	$341	$392
2004	450	510
2005	4,308	21,299
2006	5,390	54,025
2007	11,077	66,189
2008	22,840	61,935
Total	$44,406	$204,350

The financial model assumes full reimbursement of these projects. Given that reimbursement has been assumed in the rate making process, any amount not reimbursed will in all likelihood flow directly into debt.

II-R5 Perform additional analysis of financial results using alternative, less optimistic inputs of energy prices, water conditions, and capital requirements. (Refer to Finding II-F11.)

SCL needs to perform model runs with less optimistic assumptions and clearly communicate and document what the results could mean for its future financial condition. SCL should have a clear understanding of the potential impact of the variables it confronts and how they affect decisions regarding rates and debt. This should be done before another crisis occurs. At a minimum, each of the potential financial impacts described in the findings section should be addressed singularly and in combination.

II-R6 Provide quarterly reports to the Mayor and the City Council on progress in meeting its financial goals. (Refer to Finding II-F11.)

The City Council and the Mayor should be provided with a quarterly report and presentation that describes exactly how effective SCL is in meeting its plan. The format should be developed jointly by the City Council staff and SCL but should, as a minimum, include the following:

- Details of off-system sales and revenue versus targets.
- Status and impact of conservation programs on demand and revenue.
- Status of O&M budget, including any cost reduction initiatives.
- Status of CIP including any reduction initiatives and threats to cost recovery.

THE 2000-2001 ENERGY CRISIS

II-F12 The 2000-2001 energy crisis had less impact on SCL's current financial condition than management contends.

The 2000-2001 energy crisis has been discussed as if it were the major cause of SCL's current debt load. In fact, SCL's debt load had been steadily increasing since at least the 1970's and increased at a greater pace in the 1990's. The financial impact of the crisis is well documented and has been reported, analyzed, and discussed in numerous papers. We will not replicate the details here, but a summary is appropriate.

The energy crisis that arose in 2000 directly translated into a financial crisis for SCL. SCL had to significantly increase its borrowing because it could not recover purchased power costs through its existing rates and outside sales. Rates, which had been set on December 24, 1999 for a three-year period, had projected a 1.8 debt service coverage ratio based on stable energy prices.[28] No utility had anticipated the unprecedented power purchase costs incurred in 2000-2001. From August 2000 through January 2001, SCL spent over $200 million on purchased power, well above any amounts anticipated.

The impact was pronounced. SCL expected that the debt service coverage ratio would decline to 1.22 by September of 2001 without a rate adjustment. [29] Also, there would be insufficient funds to finance any CIP through cash regardless of cost controls. The wholesale market alone was expected to generate almost a $51 million deficit for SCL in 2000 relative to the forecast used in the 1999 rate setting. [30] As a result, SCL was forced to incur significant, unplanned debt to cover the shortfall.

During 2001, SCL issued a total of $503,700,000 in bonds of which approximately $308,000,000 was additional money while the remainder was applied to refinancing existing bonds. SCL also issued $182,210,000 in Revenue Anticipation Notes (RANs) which are due in March of 2003. SCL also borrowed $97,000,000 from the City's cash pool when it became apparent that the previous bond issues would be insufficient to cover 2001 operating expenses.

While the energy crisis was a major contributor to the financial problem, other issues also had major impacts:

- Capacity short position – Once the Centralia power plant capacity was sold, SCL had to rely on the short-term power market for some of its power purchases. This was a risk that decision makers should have understood. Instead of securing a contract for capacity for the immediate future, SCL opted to stay short and buy on the short-term market.
- Low water – Water conditions always vary and the conditions of the period, while severe, should not have been completely unanticipated.

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[28] The debt service coverage ratio is a driving factor in rates, not an output to the rate making process.
[29] SCL Issues Brief, Wholesale Power Market Prices and Seattle City Light Rates.
[30] SCL Issues Brief, Wholesale Power Market Prices and Seattle City Light Rates, Attachment A.

- Risk Management - As discussed in the risk management chapter, SCL could have been better positioned for the energy crises if it had better prepared its risk management function. For example, SCL's risk management manual, a critically important document, was and still is out of date, incorrect, inadequate, and poorly controlled. It is not serving the functions for which it is intended. An essential element of a risk management program includes an effective means for limiting losses, which was not in place at the time of the energy crises.

  Risk analysis must play a critical role in the strategic planning and other important decision-making functions, not just in the area of power marketing. Despite what appears to be sufficient skills and tools in this area, SCL does not appear to effectively integrate risk analysis with its decision-making processes.

II-R7 Implement a plan to reduce debt load which will provide greater flexibility during a financial crisis. (Refer to Finding II-F13.)

SCL, the Mayor, and the City Council will need to successfully address the financial management issues discussed in this chapter, and the risk management and operational issues discussed in Chapters III and IV respectively. The key task they must undertake is to significantly decrease SCL's debt load so that it will have the necessary tools and flexibility to handle future crises.

We have heard comments that the 2000-2001 energy crisis was a "Perfect Storm" and is unlikely to happen again within our lifetime. While we may never experience an energy crisis identical to that of 2000-2001, it is also true that other new and unexpected events will challenge SCL, and it will need to be ready to respond.

III. RISK MANAGEMENT

"There is nothing so disastrous as a rational investment policy in an irrational world."

- John Maynard Keynes

A. SUMMARY OF MAJOR FINDINGS

Our assignment in the risk management area has been to "assess City Light strategy" and to "provide the Council with recommendations for improving the long-term operations of City Light (SCL)." We have reviewed SCL's risk management functions relating to the power marketing business as well as the use of risk management strategies, techniques, and analytical tools in important decision-making processes including strategic resource planning.

In reaching judgments on the quality of SCL's risk initiatives, we emphasize the evolutionary nature of the risk management function in today's utilities. Several years ago, the science of risk management, as now practiced in the utility industry, was virtually unknown to even the most sophisticated firms. Its presence has expanded throughout the industry, yet in many ways the target is a moving one[31], and utilities continue to work towards better systems and improved risk management methods.

Given this reality, it is simply unrealistic to expect that SCL, or any other utility, could develop instant optimized capabilities in this area. Accordingly, we have placed the most emphasis in our analysis on the momentum and trajectory that SCL has established, the speed at which they have developed vis-à-vis the City's needs, and the degree that they have positioned themselves to move with the industry's changing demands and increasing expectations. We do not presume to judge the organization against the same standards as a large, established, sophisticated trading firm.

With this caveat in mind, we summarize our major risk management findings below. Further discussion of these issues, as well as many other findings and recommendations, are presented in the remainder of this chapter.

- SCL management was prudent and forward thinking in establishing the Power Marketing Group (PMG). The initial scope, the approach to staffing, the timing of startup, and the later appointment of an independent risk manager were all positive moves.

[31] SCL is itself an excellent example of the notion of a moving target. Consider the very different nature of today's risk management challenges, with SCL in a net long position and low market prices versus the situation less than two years ago – a net short position and high market prices.

- The power marketing and risk management functions at SCL, although generally meeting the Utility's limited current needs, have a number of serious shortcomings that existed before and during the crisis and threaten the future.

- Although there is no question that risk-related activities could have and should have been managed better before and during the crisis, there is no assurance that the consequences would have been substantially mitigated.

- The Risk Management Manual, a critically important document, is out of date, incorrect, inadequate, and poorly controlled. It is not serving the policy and programmatic functions for which it is necessary and intended.

- It is essential that a risk management program include effective means for limiting losses, especially in times of market stress. SCL does not presently have suitable measures in place to define loss limits and to require appropriate management response when such limits are threatened. This was a root cause for some of the problems during the crisis and continues today[32].

- SCL's apparent cultural issues (i.e., defensive responses to criticism, weaknesses in self-analysis and self-improvement, etc.), as discussed in detail elsewhere in this report, must be carefully addressed by the PMG. The consequences of such weaknesses, if they exist, will be more severe in the PMG than elsewhere.

- The City Council has serious risk management oversight responsibilities, but these are not adequately defined. Furthermore, the current working relationships between SCL and the City Council seriously impede, and perhaps preclude, Council's ability to faithfully discharge this responsibility.

- In addition to the programmatic elements of risk analysis that are required of the marketing organization, risk analysis must also play a critical role in strategic planning and other important decision-making functions. Despite what appear to be sufficient skills and tools in this area, SCL does not appear to effectively integrate risk analysis with its decision-making processes.

The basis for these findings is explained in detail later in this chapter.

B. POWER MARKETING – SOME INDUSTRY PERSPECTIVES

Poor communication is perhaps the greatest management sin in any business. In typical utilities, the communications in the power marketing business are exceptionally complex

[32] It is recognized, however, that the consequences of a major market upset are far less today because of SCL's long position and its market strategy. This does not obviate the need for prompt attention to this issue.

and often become a most glaring root cause of governance, management, and operational problems.

We have seen repeatedly in the industry that widely used terms can have drastically different meanings to different people. In addition to a different definition, the term can also carry a different emotional context. For example, the term "derivative" is very often an immediate turn-off for municipal managers, raising the specter of the Orange County fiasco[33]. It is not unusual that, in a group of five managers with different backgrounds, a given term might have five different meanings and also carry five different levels of emotional baggage. The degree of these "miscommunications" can preclude effective debate of the issues and development of rational management policies. This seems to have occurred in Seattle as well as in many other utilities.

We, therefore, stress that effective discussion of risk management and marketing issues requires supporting educational initiatives. The following paragraphs are a very small step towards that objective, but those responsible for management and oversight of SCL's risk-related activities need to do far more to "get on the same page" with each other. Although no one may be at fault, it is not unreasonable to conclude that the parties are indeed speaking different languages. Poor policy can often result more from miscommunications than from issues of competence.

A strong effort, well beyond the simple definitions provided in this report, is required to develop a common basis for decision-making so that SCL, Council, and other stakeholders are speaking the same language.

III-F1 The language of power marketing and risk management is often imprecise, complex, and confusing, especially to those that are relatively unfamiliar with the business. The burden is on SCL and those that need to be "in the loop," such as the City Council, to work together on suitable educational initiatives.

DEFINITIONS

There is a tendency in the industry (which we unfortunately share) to use many terms interchangeably and at times imprecisely. This can create considerable confusion among outside observers. Accordingly, we will define a number of used and abused terms associated with power marketing and risk management.

Power Marketing

Power marketing, a term once viewed in a narrow sales context, now embraces many activities. In this report, we use the term in its broadest sense to apply to an organization's interfaces with the power markets. Those interfaces can involve many different types of transactions that can range well beyond the traditional purchase and sale of energy.

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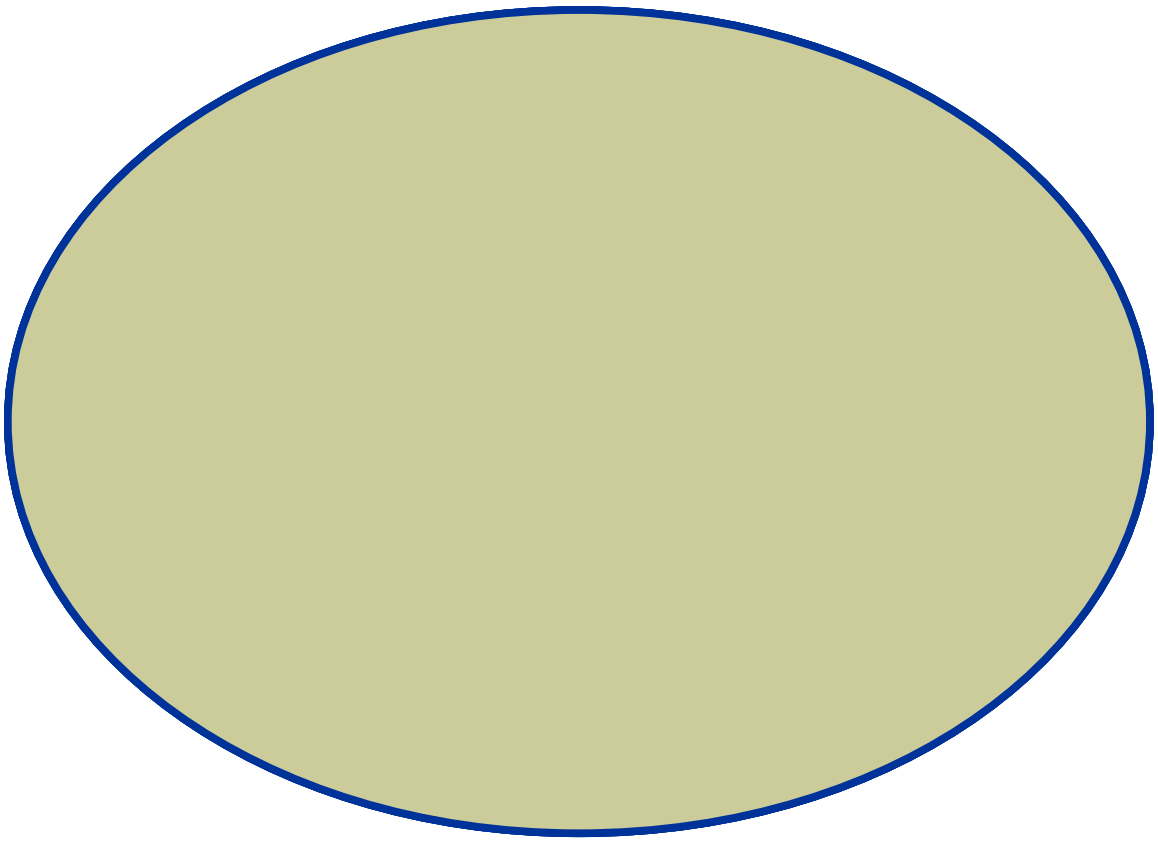
[33] The Orange County Treasurer utilized derivative instruments in a wild spree of speculation, effectively bankrupting the County.

Exhibit III- 1
Activities of the Power Marketing Group



Consider the diagram above, *Exhibit III-1*, which depicts the market efforts of SCL's Power Marketing Group (PMG). Although the group's obvious mission is the "purchase and sale of energy and capacity to meet SCL's load," it is clear that they are involved in many other activities, some complimentary to the main mission, some flowing from the operational challenges of the electric system, and some simply representing ways to generate additional revenues, thereby helping to lower SCL's rates.

As we use the term "marketing" or "power marketing," then, it should be construed as "interfaces with the market." The term "trading" has a similar meaning in our context although it inappropriately carries an image of speculative and uncontained risk for many observers.

Risk Management

The topic of this chapter, risk management, also suffers from many incorrect perceptions and definitions. Risk management is precisely what it says – it is not risk avoidance or risk elimination - rather it is management of one's exposure to a defined risk within the context of one's willingness and ability to take on such risks. The key here is that some degree of risk is unavoidable[34], and the parameters in which we choose to manage risk will be defined by our tolerance for risk and the financial consequences to us of a bad outcome.

A sound risk management program gives us the ability to define, measure, monitor, analyze, control, and mitigate risk. The program will have strict rules to prevent people from stepping outside its bounds and to provide them direction in times of market stress. It will have sophisticated analytical capabilities to quantify risks and gauge the potential outcomes from various scenarios. It will be aligned with the strategy and personality of the organization, prohibiting risks that are contrary to strategic objectives or out of line with the unit's risk tolerance.

In this report, we will examine the broader applications of risk management in a utility recognizing that the discipline applies beyond the power marketing and commodity trading functions. Consider *Exhibit III-2,* which illustrates two strategic levels in addition to the transactional controls discussed earlier. These strategic elements are extremely important to SCL.

[34] There can be debate here. Suffice it to say that risk can always be transferred to a willing third party at a price, but that the price for complete risk mitigation will generally be prohibitive.

Exhibit III- 2
The Broad Scope of Risk Management

At the market level, the nature of the utility's business in the marketplace is defined. At SCL, this largely takes the shape of direction from the Risk Management Committee (RMC) at its weekly meetings. Discussions take place on the current risk position and the appropriateness of taking action in the market during the following week. To the extent that market actions are desired, the RMC directs the PMG accordingly with suitable guidelines as appropriate.

At the utility (corporate) level, risk management and analysis should play a large role. This broader application of the science of risk management will go beyond market transactions and should integrate with all of the important decision-making processes. The arsenal of risk analysis tools is a valuable asset of SCL, and it should be brought to bear in all important decisions.

Probabilistic Analysis

Probabilistic analysis is a key management tool for the analysis of risk and the support of key decisions. Traditionally, decisions are made on a deterministic basis; i.e., assumptions

are made and values for the parameters of interest are set. The risk that those assumed values are wrong is not generally measured, other than perhaps by simple sensitivity analysis. The benefit of probabilistic analysis (as opposed to deterministic) is that the full range of outcomes can be examined together with their likelihood. The risks associated with critical decisions, therefore, become much more visible and, most importantly, quantifiable.

SCL employs such probabilistic tools both in the PMG and the Financial organization.

Enterprise Risk Management

We have not dealt with Enterprise Risk Management (ERM) in this report, but we will introduce the topic here as the next logical progression of the risk management discipline. ERM is growing in many industries, including utilities, and will most likely represent the next generation of risk management.

ERM provides an integrated view of risk across the utility compared, for example, to the narrow focus that an individual business unit might adopt. This offers many advantages including: standardized approaches, integrated decision-making, the ability to invest in more sophisticated tools, and assurances that everyone in the management chain is on the same page.

Perhaps the most important element of ERM is the ability to manage risk on a more diversified basis. For example, the impact of a certain risk (such as weather) on one business unit might be the opposite of its impact on a sister unit, creating a natural hedge for the firm. Managed in isolation and charged with managing its own risk, each unit might buy its own hedge instrument, thereby wasting a great deal of money.

Exhibit III- 3

Popular Myths in Marketing and Risk Management

(Some of which may be influencing Seattle City Light policies)

- A sophisticated power marketing group, including trading and risk management skills, is optional for a Municipal Utility.
  - Fact: *such a group is essential!*
- A power marketing group creates risks for a utility.
  - Fact: *a capable, well-managed group will substantially reduce the risks faced by a utility!*
- A position of zero risk can and should be attained.
  - Fact: *zero risk is not possible, and if it were, we couldn't afford it!*
- A bad result in the market means that the underlying decision was bad.
  - Fact: *day-to-day decisions involve winners and losers – it is the basis for the decision that defines prudence, not the outcome of individual events!*
- A top notch marketing group will consistently "beat the market".
  - Fact: *very few, if any, people can consistently predict future markets (but virtually every marketer claims to do so)!*
- Derivatives are high risk instruments.
  - Fact: *their risk depends on the application, and they can be excellent risk reduction instruments when applied as such!*

THE ROLE OF POWER MARKETING (AND SOME POPULAR MYTHS)

We observe (somewhat facetiously) that the utility industry's power marketing functions are fast becoming a "can't live with it and can't live without it" type of relationship for utility management and oversight bodies. Unfortunately, there is a great deal of merit to both sides of this equation, and it creates a problem for all utilities, especially those with limited resources.

"Can't live without them . . ."

First we should clear up one myth (#1 in *Exhibit III-3*) that perhaps has some influence on SCL's activities; i.e., the notion that a sophisticated power marketing function is an option. In today's utility world, the requirement to interface with the market exists for all utilities. The volume of transactions can be minimized through various strategies, but the necessity for substantial interface cannot be eliminated, whether that interface involves power sales, purchases, trading, or the many other products and services utilities are forced to market in a competitive wholesale market. The only decision left for the utility is the degree of sophistication desired to play in the game – to play or not to play is not an option.

Given the necessity to "play," our question on sophistication can be answered by examining the other players. With millions (and sometimes billions) of dollars at stake, this is not a place for penny-pinching. The other side of any transaction (the counterparty) will very likely have invested heavily in skills and capabilities. Seattle needs to ask itself what handicap, if any, it is willing to concede to these people. A logical answer is "some, since we cannot afford the same degree of investment as the larger players, but we need to minimize the gaps between our capabilities and our competitors."

The bottom line is that, truly, we "can't live without them."

III-F2 The need for sophisticated power marketing and risk management functions is not optional for SCL. As long as competitive wholesale markets exist, the players are at risk and SCL has no choice but to be a player.

". . . and can't live with them"

A second myth (#2 in *Exhibit III-3*) is the belief that an active power marketing function brings a great deal of danger to the utility, suggesting to some that we simply cannot afford the risk. Unfortunately, this thinking has proliferated recently as some of the big players have dismantled their trading floors. Although this has led directly to some fundamental changes in the marketplace[35], it is nevertheless a little misleading for the following reasons:

- These players are not really leaving the market – they are simply cutting back their speculative activities and proceeding with a smaller marketing operation.

- The "exiting" players have been operating on a different plane than SCL – any comparison is truly "apples and oranges." For example, these firms had much larger trading and deal-making organizations (hundreds of people) and pursued all types of energy-related transactions.

- The driving strategies and business objectives of these firms were far different than SCL's and in many cases were seriously flawed. The single most notable feature in this regard was highly leveraged trading operations effectively seeking to make money out of nothing. When markets turned bad, the two-edged sword of leverage cut deeply. As a result, many firms are now seriously impaired.

In fact, a sophisticated power marketing function that is well managed with effective supporting programs, including a strong risk management program, is a municipal utility's most effective response to the risks and uncertainties of the market.

It is, of course, true that power marketing groups, and commodity trading organizations in general, have at times run amok with fatal consequences for their parents. The obvious conclusion here is the need for strong management, effective oversight, and strict controls.

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[35] We do not mean to trivialize these changes, which include fewer players in the market due to the reduction of some trading functions and also the disqualification of many players on the basis of credit risk.

An organization incapable of these management qualities truly "can't live" with a commodity trading function.

Risks in a (sometimes) crazy world

In reacting to the new competitive environment, the utility industry did not seek to change the long-standing monopoly rules of the game. In fact, most utilities reacted with either a begrudging acquiescence or an aggressive resistance. Life in a relatively risk-free environment will generally be preferred to the helter-skelter of an active commodity market.

Although many utilities can be criticized for a "too little - too late" approach, and still others continue with backward policies, most did indeed recognize the need to build the skills and capabilities necessary to manage risk. Given the many negative elements associated with the utility industry's reluctant embrace of competition, the recognition of the risk involved and the steps taken to mitigate that risk are somewhat of a positive.

A few felt it was possible to effectively eliminate all or most of their risk. In this regard, they were wrong in two ways. First, it is not possible to eliminate all risk. Risk can be transferred to a third party for a fee, much as we might buy an insurance policy. However, the "premium" to eliminate all risk would be prohibitive.

Second, many firms fail to view risk in a broad enough context, instead focusing on a limited set of risks while failing to see others (like, for example, the insurance company going broke). Ironically, some of the firms that felt they were eliminating all of the risks of a competitive market were actually the most decimated, and not only in California. Consider the many firms that chose, or were forced to choose, a very limited role as a default supplier. This supposedly "no risk" part of the business turned fatal for some when they were forced to pay wholesale prices that exceeded the frozen rates they were permitted to charge their customers.

The notion of a "no risk" strategy, as promised by Myth #3 in Exhibit *III-3*, is no longer possible.

Performance – Can a good decision produce a bad outcome?

Our Myth #4 in Exhibit *III-3* suggests that a bad outcome means the initial decision was bad, and a really bad outcome means the decision was really bad. Both assumptions are wrong.

Consider, for example, a coin flip in which you are given two-to-one odds. The decision to accept the bet is a good one, but the outcome will be bad half of the time[36].

In measuring performance, then, we need to examine the decision-making process and the rationale for making the transaction. Was there a sound basis for the transaction? Was it

[36] For a $1 bet, the chances of winning or losing are equal, or 50-50. The win pays $2 while the loss costs only $1 – therefore this is a great deal.

within our risk parameters?[37] Can we expect a net benefit from such deals in the long-term? If the answer to each of these questions is acceptable, the trader will come out well with time, but for short periods may experience "bad outcomes." The results achieved by a marketing group, therefore, cannot be judged by today's transactions or even this month's, but must be evaluated over a sustained period.

Beating the Market

Perhaps the most abused myth of all is the notion that a sharp firm will consistently beat the market (Myth #5 in *Exhibit III-3).* As the marketers became more aggressive in the late 90s, they offered many partnering opportunities to utilities including SCL[38]. The proposed terms often included a sharing of the savings that would presumably result from the marketer "beating the market." It appears certain that some marketers really believed their own hype and entered agreements accordingly.

The fact remains that few marketers even try to profit from establishing large exposed positions that depend on a specific market move for success. Many of those who did are no longer in the business.

Derivatives

We noted above that derivatives carry a bad reputation (Myth #6 in *Exhibit III-3*) and are often forbidden in young utility marketing organizations. We will discuss later the evolution of organizations and will point out that derivatives are a good example of instruments that, with further knowledge and confidence, will no longer be considered objectionable.

Derivatives are securities that derive their value from some underlying commodity. Some derivative strategies can be very high risk; i.e., they have both unlimited risk and extremely high leverage. However, derivatives can also represent a very conservative instrument.

Call options[39] can be used, for example, in conservative strategies to serve as an insurance policy against very high energy prices. In that case, the buyer of a call option transfers the risk of high energy prices to the seller (or writer) of the option. The seller can choose to take on virtually unlimited risk or may in turn hedge his position. For example, if the seller owns an otherwise idle combustion turbine, he has also eliminated his risk while earning the premium on the option.

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[37] Note that our "no-brainer" coin flip is actually a poor decision if the stakes are high enough to hurt.
[38] These offers were appropriately declined by SCL as will be discussed further later in this chapter.
[39] A call option gives the buyer the right, but not the obligation, to buy the commodity at a given price (the strike price) for a defined period of time.

In summary, derivatives do not have to be risky (or evil). They represent important and valuable tools for the marketing group and will produce real benefits for SCL when the organization is ready to utilize them[40].

THE EVOLUTION OF POWER MARKETING

Utilities throughout the U.S. historically maintained a culture strongly focused on system reliability. "Keeping the lights on" was always the top priority, and this was reflected in dealings among utilities. Furthermore, there was little or no incentive to take advantage of a fellow utility. Accordingly, system operators transacted business among themselves with little regard for commercial considerations. Power was bought and sold with small margins, often based on a shared savings approach.

This "club" was rudely disrupted with the arrival of competitive wholesale markets and a whole new cast of players. The industry's most fundamental values, such as "one for all and all for one," "keeping the lights on," and "sharing of savings," were no longer gospel, at least to the new players. Instead, the market began the evolution that culminated in the market abuses, regulatory failures, and total dysfunction that contributed to Seattle's crisis.

The traditional utilities had no choice but to evolve with the industry. Virtually every utility of size began to adapt its system operating organization for the new marketplace. To some extent, this created some of its own unique problems. In many utilities, power system operations was a somewhat insular function, little understood by managers and other functions and often non-communicative, except with other operators. It is somewhat of a contradiction, and not a beneficial one, that such organizations were the genesis for utility trading floors, which obviously require an external focus and strong interrelationship skills.

C. ANALYSIS OF POWER MARKETING AND RISK MANAGEMENT

In the prior sections, we have established some basic terminology and provided the context from which the power marketing and risk management functions have emerged in the utility industry. In this section, we will discuss SCL's marketing and risk management activities including the capabilities of the PMG and the viability of the risk management program.

EVALUATION CRITERIA

Judging the effectiveness of utility risk management functions can be highly subjective. In addition, the standards that should apply can differ considerably among organizations. For example, many SCL people felt that the Deloitte and Touche audit was unfair in that it judged them as an "Enron-type" organization; i.e., a large aggressive marketer. While we

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[40] This in no way implies that the SCL organization is not qualified to use these instruments. Rather, the organization first needs to establish other characteristics such as the confidence of its oversight groups, which will be explained later in this chapter.

do not fully agree with SCL's conclusion, we nonetheless support the notion that standards can and should differ among organizations.

The primary criterion is, therefore, to measure performance against the unit's mission and expectations, all within a framework of the utility's risk strategy. In SCL's case, the reliable and economical supply of power to meet its own native load is the top priority. This is not the priority for many of the firms with which SCL must interface. For example, some seek to maximize the yield from their generation assets. Others seek to profit from trading and have few if any physical assets.

Despite the billions of dollars transacted in the regional power markets over the past few years, the market remains immature, which is evidenced by the chaos of the 2000-2001 crisis and the ongoing destruction of some of the top players. Similarly, many of the players themselves are immature – consider the gaming and profiteering in which supposedly responsible companies killed the goose that laid the golden egg, sacrificing their long-term prosperity for this quarter's earnings. Literally, yesterday's "best practices" have become today's congressional investigations.

Given this state of flux and, at times, dysfunction, one might reasonably question the veracity of any municipal utility that claims to have all the answers. Just a few years ago, such organizations operated in a totally protected environment, and the term "risk management" was merely a high-handed way of saying what the insurance guy did. To expect that such organizations could instantaneously adapt to a new market, particularly one that has behaved irrationally and one which requires drastically different skill sets, is asking too much.

We, therefore, suggest that rather liberal criteria are appropriate in judging the competence of today's municipal power marketing organizations. This recognizes that the growth and maturation of a power marketing function is somewhat of an evolutionary process – it takes time. Perhaps the real measure of performance is the momentum and trajectory that is established and not the absolute capabilities captured by a snapshot at a particular point in time.

We do not mean to suggest that an incompetent organization is acceptable as long as it is improving. Our tests will answer the question on today's level of performance. However, we will also address the evolutionary path and judge if the factors are in place to assure that the organization will grow with a changing market and the increasing needs and expectations of the utility.

THE DELOITTE & TOUCHE AUDIT

In August 2000, at the direction of the City Council, SCL management retained Deloitte & Touche (D&T) to conduct a review of the operations of the PMG. We found the D&T review very consistent with expectations for a group less than two years old. Although the findings were extensive, we did not interpret them as negative. Rather, the City was prudent in conducting such a review at that time as a normal tactic to ensure the group was on the right track and to provide a stimulus for further development.

D&T obviously prepared the audit with the evolutionary nature of the organization in the forefront of their thinking and seemingly applied criteria similar to that discussed above. Specifically, they categorized their recommendations as necessary for today or, alternately, necessary in the future as the group evolves. In general, the effort seemed appropriate for the time and the recommendations amounted to a good laundry list for future improvement.

However, the audit was not well received by SCL. Interviews with management and staff suggested a relatively high level of discomfort with the results. Some of the criticisms included:

- The findings were overly negative.
- The review examined PMG in the framework of a large, aggressive trading organization – "we're not Enron."
- The review addressed risk at the detailed transactional level missing the important strategic elements that may be a more critical need for SCL.
- The review failed to identify conflicts between strategy and risk targets.
- The review did not address, nor elevate for Council, the important issue of portfolio risk.
- The review did not critique the practice of planning for average water.
- The review did not adequately elevate for Council the important issue of portfolio risk.

Perhaps as a result of these opinions, and notwithstanding that the scope of the audit was defined by SCL, SCL's response to the audit was not thorough. City Council, arriving at a similar conclusion, stated, "City Light did not move particularly quickly to implement Deloitte & Touche's recommended changes."[41] A formal action plan was prepared, but it only addressed the first section of the review, Organizational Alignment. The second and third sections, Risk Measurement and Performance Measurement, respectively, were not formally addressed.

In addition, SCL addressed only those recommendations in Section 1 that D&T designated as higher priority (3 or 4 in the D&T rating system). While it made sense for SCL and D&T to concentrate on the higher priority items, we note that the D&T findings that were rated 2 (the recommendation should be considered, but it is not essential) included some excellent suggestions that could help the growth and development of the PMG. In some cases, we believe the 2 rating was inappropriate, but in any event, PMG lost a major improvement opportunity when it ignored the 2s. Suggestions for the City Council's role, limiting losses, stop orders, value at risk, stress testing, and other important program elements were all missed because of SCL's decision to focus only on Section 1, and only on the higher priority elements of Section 1.

SCL noted that the D&T audit was quite extensive and that resources to respond effectively were limited. They further stated that their initial response to the audit was just a start,

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[41] City Council's July 9, 2002, memorandum to the Mayor's Task Force on City Light.

targeted at the high priority items, and that the crisis interrupted the more intense effort that was intended. In any event, the work was not given the priority it deserved.

III-F3 The City Council and SCL management were prudent in commissioning a review of the PMG in 2000. However, the review was not well received, and SCL's response to the findings and recommendations was not thorough.

III-F4 The PMG lost a major opportunity to improve its operations and move to a higher performance level when it categorically ignored many elements of the D&T audit.

Despite its age and pre-crisis status, the D&T work can still make an important contribution to PMG's ongoing development. At a minimum, it can serve as an excellent educational document. SCL could be well served by reviewing the complete report again and assessing if, how, and when the recommendations might be implemented. The process of understanding why D&T felt as they did will also be a beneficial exercise for the organization.

III-R1 Revisit the August 2000 Deloitte & Touche audit of the Power Marketing Group (PMG) to examine all of the findings (as opposed to only those in selected sections or those with certain priorities) and phase in improvements when and if they become appropriate. (Refer to Finding III-F4.)

SCL'S MARKETING AND RISK MANAGEMENT CAPABILITIES

The Birth of the PMG

The roots of an organization, not surprisingly, have a strong influence (for better or worse) on the capabilities and culture that eventually emerge as the unit grows. The concept of a PMG was initially discussed in a 1996 consultant's review of the power management functions. At that time, the industry was responding to FERC's aggressive moves to establish robust competitive wholesale markets. The initial action by many utilities was to segregate so-called merchant functions from transmission functions, which for most amounted to a splitting of system operating responsibilities into two groups - transmission and generation. The group housing the generation dispatchers naturally continued and expanded its role in the emerging new power market and in most cases evolved to a formal power marketing function.

SCL made the decision to establish a formal group in late 1998. Although this was two years after the 1996 consultant's review, the timeframe was not especially out of line with other utilities, and one could not say that the PMG started behind the curve. They were created at an appropriate time.

The wisdom of setting up such a group is clear in our opinion. In fact, we found SCL's justification in this regard to be under-stated. Perhaps this spin was helpful, or even necessary, in garnering support for the concept at that time. It, nevertheless, resulted in a number of fundamental assumptions that would shape the early days of the group, some of which continue to influence its activities today.

III-F5 SCL management was prudent and forward thinking in establishing the PMG in 1999. The initial scope of the group, the approach to staffing, and the timing of startup were positive moves.

Of particular interest are the expectations for cost, benefits, and risk. The justification of the group on the basis of "paying for itself" was somewhat short-sighted. The PMG seemingly continues to be managed with the presumption that it will earn its keep or face extinction. Actually, both sides of this equation are problematic as we will see later in this chapter under "Performance Measurement."

Expectations for risk were also made clear in the proposal, and, in retrospect, they proved inadequate. It is somewhat troubling that the (failed) risk limitation measures in the proposal have not been superceded with a more effective, structured approach. We will discuss the ramifications of this problem later in this chapter under "Policies."

III-F6 SCL's initial plans for managing risks to specific limits, as described in the proposal forming PMG, were not put in place. Unfortunately no formal, structured substitute was put in place.

Build, buy, or partner – the first key decision

As utilities formalized their power marketing strategies, each was faced with a decision on how to enter the business[42]. The capabilities required varied as a function of the size and expected market role of each utility with the larger more active firms facing a requirement for a huge buildup in both quantity and quality. Municipal utilities generally needed less in terms of quantity but were equally challenged in the quality end facing the need to bring in new skills and supporting tools.

The utilities had three choices on how to add the necessary resources: (1) build from the existing internal base; (2) form an alliance with a marketer or other firm; or (3) acquire an intact organization through a merger or acquisition. It is clear that the latter acquisition strategy was only available to the larger firms.

Municipals chose to either build or partner. Theoretically, the partnering concept made a great deal of sense, and still does. Practically, few alliances have survived. Nevertheless, those utilities that participated in alliances, even those that failed, surely achieved some benefits by moving up the learning curve faster with a savvy partner.

SCL chose the build option, as did many other firms. They considered alliances in the PMG proposal but dismissed that option as inappropriate for the circumstances at that time. In retrospect, that decision seems correct. It does not mean, however, that some form of alliance may not be appropriate for SCL in the years ahead. This possibility will be discussed later in this report.

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[42] The word "enter" here is not literally correct since everyone was already in the market.

Staffing – the key to success

SCL is, like most municipal utilities, somewhat of an inbred organization. Hiring from the outside, especially en masse, is rarely done. However, the utility correctly saw the necessity for such a strategy at the formation of the PMG, hiring nine people with power marketing experience from the outside. This not only added needed skills to the organization but provided a cultural infusion that was more compatible with competitive markets. Given the insular nature of the founding organization, this was a heroic first step that surely got SCL off on the right foot.

PMG management assesses the staffing strategy a success, and the reasonable retention rate seems to back this up.

III-F7 SCL's decision to build PMG capabilities internally, with selected new hires, was appropriate and formed the basis for a successful organization.

As we have repeatedly emphasized, however, this is an evolutionary process, and "first steps" must serve as a building block, not the final result. SCL's people need the opportunity to grow in terms of skills, supporting tools, and their market activities. This means continuous development opportunities, ongoing training, improving tools, substantial interface with other market players, and continuing development of new products and services.

The PMG seems sensitive to this issue and stresses that they have worked hard at employee development although their initiatives were somewhat disrupted by the crisis. The budget for the 17-person group includes $30,000 for training and $50,000 for travel. While this may seem generous for a traditional utility group, it is borderline for a young marketing organization.

III-F8 The PMG's current skill set seems appropriate, but its long-term viability and effectiveness will be dependant on the continual growth and development of its people.

III-R2 Enhance PMG's employee development initiatives through a formal, aggressive program including ongoing training and improved opportunities for personnel to interface with their peers in the marketplace. This must also include the necessary budgetary support. (Refer to Finding III-F8.)

SCL's assignment of a Risk Manager organizationally independent of the PMG deserves praise and represents a key step in the continuing maturation of the organization.

III-F9 SCL's appointment of a risk manager independent of the PMG was an excellent response to the new challenges of risk management.

Other "Shaping Factors"

We have established that the top priority of the organization must be people; but this simplified observation detracts from the complexity of building and maintaining a capable

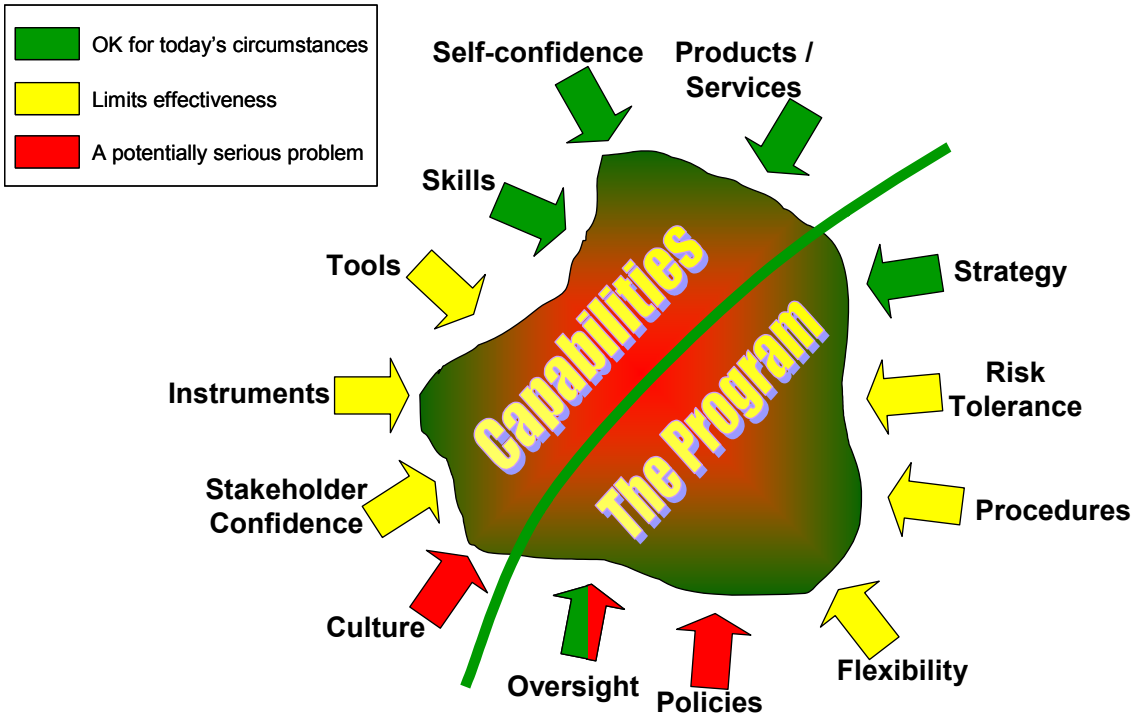
power marketing function. There are many other elements that directly shape the organization's ability to succeed. These include:

- Products and services
- Self-confidence
- Skills
- Tools
- Instruments
- Stakeholder confidence
- Culture
- Strategy
- Risk tolerance
- Procedures
- Flexibility
- Policies
- Oversight
-

We will discuss these factors in the sections that follow. In the meantime, please consider *Exhibit III-4*, which illustrates these factors and assigns a rough grade as to how each is reflected in SCL's current program. The grading legend used in the discussions below is:

OK for today's circumstances	3
Limits effectiveness	2
A potentially serious problem	1

Exhibit III- 4
Typical Factors Shaping the Marketing and Risk Management Functions



3 Products and Services

The wide variety of products and services now managed by the PMG is illustrated in *Exhibit III-1* earlier in this chapter. It represents a significant and inevitable expansion of the group's original objectives, which were limited to (1) covering SCL's energy deficit; (2) selling surplus energy; and (3) arbitrage opportunities[43]. Although the majority of the group's time and effort goes into its primary objective, the breadth of today's offerings is a credit to the organization and illustrates well our points about the evolutionary nature of the power marketing function.

[43] "Arbitrage", as used in the original proposal for PMG, actually covers a number of products, all of which involve the short-term trading of energy.

III-F10 The products and services offered by the PMG are evidence of the group's evolutionary growth. The business sense appears to be in place for further growth in the future.

3 Self-confidence

Power marketing groups are rarely at a loss for confidence – in fact, the opposite extreme (over-confidence and perhaps arrogance) will more often be the problem. There are cases, however, particularly where the utility may be smaller than its trading partners, in which a lack of confidence appears, and this can be especially dangerous. The symptoms are usually the same: an insular organization, limited external relationships, a defensive culture, a secretive approach to the business, weak communications including, perhaps, conflict with the oversight function, and a general isolation from other internal functions. It should be obvious from these typical symptoms that a lack of self-confidence will preclude success. As the organization becomes more and more inwardly focused, its effectiveness in the marketplace and the confidence of its sponsors will disappear.

Although a few of these symptoms may be present in the PMG, we did not conclude that they add up to a lack of self-confidence. The biggest boost here will be to aggressively implement the self-improvement initiatives discussed elsewhere.

3 Skills

Please refer to the above section on "Staffing – the key to success" for our discussion on skills.

2 Tools

The tools available to marketing groups have mushroomed in the last few years. (In this context, we define tools as those software systems that support the trading operations.) Hart Energy Markets' *Energy Transaction Software Guide 2002* listed integrated package offerings from 27 different vendors covering every element of the business. Unfortunately, such full service offerings can be extremely costly, prohibitively so, for a relatively small operation such as SCL, and often turn out to be not so "full service" after all.

The PMG, like most marketing groups of its size, employs a number of systems that are not always fully integrated. The reason for this is, quite simply, practicality. The purchase (or construction) of a super-sophisticated package that would effectively integrate all of the PMG's transaction-related activities would not likely prove cost-effective at this time. On the other hand, SCL needs to think of the future, and its tools need to evolve in a manner similar to the organization as a whole.

In general, the tools available to the organization at this time seem adequate. There are concerns that the processes for improving existing software are not optimum and can be improved. In addition, the limited IT resources (one person) do not always seem consistent with the unit's needs. Finally, D&T, in addition to their concern for lack of system integration, noted SCL's "systems focus on operational activity rather than risk management."

III-F11 The tools available to PMG are consistent with a group of its size and adequate for today's needs. The tools will need to evolve with the organization, however, adapting to the growing needs of the PMG as well as addressing issues of system integration and an enhanced focus on risk management.

III-R3 Develop a long-term software plan that addresses today's weaknesses and anticipates future needs. This plan should address the specific concerns expressed in the Deloitte & Touche audit and identify cost effective software tools. (Refer to Finding III-F11.)

III-R4 Review the level of information technology resources made available to the PMG and add resources when and where appropriate as part of the long-term software plan. In addition, a more effective process for requesting and implementing software improvements should be considered. (Refer to Finding III-F11.)

② Instruments

See also the discussion below on flexibility.

The instruments available to the PMG seem appropriate for its needs. Transactions are generally limited to physical trades. Financial instruments, including derivatives, are not permitted[44].

These restrictions do not appear detrimental at this time. In fact, the RMC discusses the appropriateness of options strategies from time to time with the apparent presumption that they will be approved for SCL when and if conditions warrant.

III-F12 The trading instruments available to the PMG are restricted but not to the extent that the group is unable to meet its objectives.

② Stakeholder Confidence

It is quite natural for a young marketing organization to lack the confidence of many stakeholders including its own management, other departments, and the City Council or other governing bodies. Again, this is a natural part of evolutionary growth. Although this may be somewhat disturbing to the marketing group, it is quite understandable and reasonable. The vagaries of the new energy markets are well known, and the new organization will often contain veteran employees who lack some of the new skills (at least initially) and new employees who are totally unknown to the stakeholders.

Also, stakeholders often lack knowledge of the marketing and risk management business, adding to their discomfort. Coupled with the reality that even some good organizations

[44] Physical trades involve the actual delivery of the commodity. Financial transactions are paper deals closed out before the product must be delivered. Many utility trading groups believe that risk can be better contained by avoiding financial transactions.

have gotten into trouble, it is not surprising that stakeholders take a "wait and see" attitude with probably a high degree of pessimism.

This lack of confidence can impede the progress of the group. Limited resource commitments, overly restrictive controls, a reluctance to push new ideas for fear of rejection, and limits on trading positions are just a few of the potential consequences. To varying degrees, each of these is present at SCL but not unreasonably so.

We recognize that this issue limits effectiveness. If the group is able to maintain the evolutionary growth required, this problem will be self-correcting. On the other hand, a failure to successfully adopt the continuing improvement approach will aggravate the problem and limit the group's effectiveness on a long-term basis.

III-F13 PMG can be expected to make progress in winning the trust and confidence of its stakeholders and is not in an unreasonable position for its age. Improving and continuing communication is a must to continue this trend.

III-R5 Reach out to stakeholders to provide a clearer picture of PMG's roles, capabilities, processes, and accomplishments. This will include more open communication, simpler and clearer displays of information, rigorously honest assessments (for better or worse), and a generally positive and healthy working relationship. (Refer to Finding III-F13.)

The above recommendation makes sense for SCL as a whole as well.

1 Culture

We have discussed the culture of SCL elsewhere in this report in rather critical terms. Specifically, we raised the concern that the utility seems to lack a "we can do better" attitude, is defensive in the face of criticism, and is weak at self-assessment and self-improvement. We further characterized these apparent problems as very serious restraints to a successful future.

Does PMG suffer these same cultural problems? Our discussions with PMG personnel and those close to the organization suggested that culture in general, and our above-stated concerns in particular, are not an issue in the PMG. We saw no evidence to contradict their viewpoint.

But this might not be the full story. We have found that organizational culture is usually pervasive; and when a characteristic is evident at the corporate level, it logically is in place elsewhere as well. One might, therefore, conclude that if the PMG is not a victim of this culture at this time, it is surely in danger of becoming so in the future.

We will, therefore, limit our observations here to a cautionary note. The weaknesses in organizational culture that we have ascribed to SCL elsewhere are dangerous to the utility as a whole but can be especially problematic in an organization such as risk management, whose functions require strict controls and the highest standards of conduct.

III-F14 SCL's apparent cultural issues (i.e., defensive responses to criticism, weaknesses in self-analysis and self-improvement, etc.) must be carefully examined by all units but especially the PMG, where the consequences of such weaknesses, if they exist, would be more severe than elsewhere.

SCL'S RISK MANAGEMENT PROGRAM

The section above reviewed the shaping factors associated with SCL's internal capabilities and some of the performance characteristics of the organization. Equally important is a structured risk management program that controls the actions of the utility in a manner consistent with its ability and willingness to take risk. The following is a discussion of the shaping factors (*Exhibit III-4)* associated with the risk management program.

3 Strategy

SCL's current strategy with respect to energy supply risk logically flows from its current net long position. In SCL's current circumstances, the risk is that energy prices will decline and the utility will be unable to earn the revenues it expected from the sale of surplus power. In a net short position, which describes SCL's plight during the crisis, the risk is that prices will rise, raising the utility's purchase costs. The net long position is thought to be less risky because the downside for prices is bounded at zero while upside excursions are theoretically unbounded (as was illustrated during the crisis).

To hedge its risks in today's environment, SCL has adopted what appears to be a super-conservative posture selling future energy only when there is a very high probability that the energy will indeed be surplus. This confidence is achieved in two ways. First, surplus calculations are initially based on conservative assumptions for available generation (water) and load. Second, sales take place on a staged basis. As the utility's estimates become more refined with time, the amount to be sold is fine-tuned but always with the objective of minimizing the risk of being short.

For today's circumstances, we agree that SCL's strategy makes sense, but with two caveats. First, there does not appear to be any visible supporting analytical basis for the strategy.[45] Do the worst case assumptions on water and load produce an optimized result? Is the phasing of sales optimum? Is the timing assumed in the strategy (up to 18 months in advance) optimum? The need for an ultra-conservative position at this time lessens the significance of these questions, but the organization needs to apply such thinking and analysis to its planning processes.

Second, SCL's conservative strategy will eventually change, and perhaps sooner than later, when stakeholders ask, "What is this conservative stance costing us?" At that time, the pendulum is likely to begin its swing back to a more optimized approach. The current

[45] The PMG reports that it does indeed perform such analyses. It is not clear, however, that these analyses are visible to or tested by stakeholders.

strategy, therefore, needs to be viewed as appropriate for today's circumstances with the understanding that the City cannot be wedded to it when times change (and they will).

III-F15 SCL's current ultra-conservative strategy (selling future energy only when there is a very high probability that the energy will indeed be surplus) is appropriate for today's environment. Recovery from the scars left by the crisis, both fiscally and emotionally, supports a "laying low" position at this time.

III-F16 SCL may apply significant analysis to the development, justification, or optimization of its market strategy, but such analyses are not generally visible to, nor are they tested by, stakeholders.

III-R6 Provide a higher degree of analytical support for chosen strategies. To the extent substantive analysis is already taking place, it should be more visible. In addition, the analytical basis, including any optimization studies and risk analysis, should accompany all key decisions. (Refer to Finding III-F16.)

As a final observation, we were impressed that each of the staff members we interviewed was able to articulate SCL's strategy with respect to energy purchases and sales. Although this should of course be expected, it is nonetheless unusual in many utilities. Consistent articulation of strategies and issues by staff evidences a major strength and is a strong indicator that the management team is on the same page.

III-F17 The ability of interviewees to articulate a consistent picture of SCL's marketing strategy is somewhat unusual (in the positive sense) and suggests that management has done a good job in establishing a common vision and organizational buy-in.

② Risk Tolerance

Marketing organizations can run the full gamut from ultra-risk-averse to highly speculative. It is obvious that most municipal utilities, including SCL, should be (and are) at the left of this spectrum. But how far left?

We have observed above that (1) it is not possible to avoid all risk and (2) risk mitigation costs money. The organization must, therefore, strike a balance between risk and cost, and what is optimum for one organization will not be optimum for another. The result of this trade-off leads to a selected strategy, and, in SCL's case, that strategy is at the left extreme of our spectrum.

However, the issue of risk tolerance goes well beyond strategy. In effect, it establishes a culture or personality for the organization and impacts all of its dealings. In the case of the PMG, the City's risk tolerance dictates PMG's mission, the instruments it is permitted to utilize, the controls on it, the transactions it may execute, the worthiness of its

counterparties,[46] and virtually every aspect of its business. This intangible risk tolerance, therefore, becomes one of our more influential shaping factors.

The City's risk tolerance, which is extremely low, is surely appropriate for today's circumstances[47]. It does limit the effectiveness of the PMG but not unreasonably so. With time and a greater awareness of cost and risk trade-offs, we expect the risk tolerance to move to the right but never very far. The former conclusion ("movement to the right") is predicated on the extremely risk-averse nature of today's strategy and the likelihood that future analyses will conclude that it is not optimum. The latter conclusion ("not too far to the right") is based on the simple reality that aggressive risk-taking is not appropriate for a municipal utility.

With respect to the need for a greater awareness of the balance between cost and risk, it will be appropriate for SCL and the Council to further this process by enhanced discussion and analysis of this critical point in decision-making. In presenting risk analyses, SCL should also present options for lower or higher levels of risk and offer analysis of the relative costs.

III-F18 A risk-averse posture will always be appropriate for SCL. The current risk tolerance, which might be characterized as ultra-risk-averse, is appropriate for today's circumstances but should be carefully re-evaluated as the City learns to better assess cost and risk trade-offs.

III-R7 Incorporate enhanced discussion of cost and risk trade-offs between SCL and the City Council as part of their decision-making activities. (Refer to Finding III-F18.)

② Procedures

A detailed examination of SCL's risk management procedures was beyond the scope of our review. Such examinations have been conducted in the past (for example, the 2000 D&T review), and procedural adequacy and compliance are also sampled during D&T's annual financial audit process.

As we noted above, SCL's procedures may have been improved with a more disciplined response to the 2000 D&T audit. We also note observations on policies, later in this section, that will surely influence some of SCL's procedures in a negative way. Finally, and most significantly, the lack of a viable Risk Management Manual strongly implies that procedures may be similarly weak. Accordingly, although we have not examined the procedures, it is unlikely that a high grade would be awarded.

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[46] Credit worthiness of the counterparty is an important factor in the risk management program. A risk-averse organization will maintain high standards in this regard, thereby diminishing the number of parties with which it is authorized to do business.

[47] As discussed above under "Strategy," the lasting traumatic effects of the crisis force a limited risk posture for the near-term.

② Flexibility

In this context, flexibility means that the marketing group is not unduly constrained by unreasonable rules. The degree of flexibility afforded the group will grow as the organization matures – what is considered a reasonable restraint at the group's inception may be unreasonable several years later.

At the present time, the PMG is rather limited in its flexibility. For example, physical transactions only are permitted, except in limited cases. Options are not permitted. Purchases and sales are carefully defined by the RMC. Timeframes for transactions are limited by the Council. Again, none of these limitations is a critical problem today. We would expect, however, that with future growth, many of these limitations can and will be relaxed[48].

① Policies

There are a number of potentially serious issues associated with SCL's risk management policies.

Risk Management Manual

From a programmatic point of view, the Risk Management Manual is an extremely important document that serves as the focal point for risk management. Unfortunately, SCL's manual is not in good shape and is not meeting the objectives for which it is intended and necessary. This casts doubt on the viability of the program.

Among the problems associated with the Risk Management Manual are

- The current version is marked "draft" suggesting that it is still under review and its policies are not yet "official."
- Although many new documents, primarily in the form of reports, have been added, the document is still dated August 2001.
- The manual does not appear to be subject to any formal document controls. There does not appear to be any way that a holder knows that he or she has the current version. Many organizations employ a strict document control process that uses numbered copies, a sequential revision numbering system, and requires receipts from the holders[49].
- There are numerous entries that are outdated indicating that the manual has never been updated. This is contrary to SCL's desire to have a "living document."
- There are several entries that are simply wrong; i.e., they do not reflect the way the organization operates.

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[48] We believe such relaxation will take place naturally with the development of the organization and the growth in stakeholder confidence. We, therefore, have made no specific recommendations for immediate relaxation of any rules.

[49] SCL did require a signed compliance statement for the original version.

- It does not appear that the City Council approved the manual or, at least, the key elements of policy.
- There are no clearly stated rules on how to define risk limits and the actions necessary when such limits are reached.

III-F19 The Risk Management Manual is out of date, incorrect, inadequate, and poorly controlled. It is not fulfilling its necessary and intended purpose and represents a serious shortcoming in the risk management program.

III-R8 Update and upgrade the Risk Management Manual and take steps to reestablish the manual's role, authority, and credibility. (Refer to Finding III-F19.)

Loss Limits

Why are loss limits essential?

"Loss limits" refer to the practice of establishing fixed points at which an organization's losses are to be limited via strict procedures and controls. Consider, for example, a utility with insufficient power to meet its load, which was the case with SCL at the time of the crisis. If prices start to rise and the utility is still short, it will begin to see rising costs, perhaps extremely so. At some point, it will want to "cut its losses." The establishment of loss limits, before such excursions happen, is an important part of a risk management program.

We offer the opinion that human beings have a great deal of difficulty making loss-limiting decisions on the fly – in fact they are far more likely to make the wrong decision as losses mount in the heat of battle. It is, therefore, a fundamental underpinning of any risk management initiative that firm loss limits be established. If the organization reaches this limit, it loses its discretion for further action – the position must then be closed in a manner consistent with previously defined rules.

A famous investor once said, "Decision-making is often a battle between the heart and the head, and the heart usually prevails." It is for this reason that a prudent gambler (an oxymoron?) will never bring his entire bankroll to the table – he fears that he will not have the discipline to limit his losses. Similarly, many investors must use actual, not mental, stop orders to protect their positions[50]. This line of thinking applies to all of us, and more so in times of stress. It has been proven time and again that we simply cannot rely on typical human responses when markets go awry.

The reason is obvious: we base our decisions on logic, but a market that has wildly departed from the norm has already left the realm of logic. We have all said at one time or another: "It can't get any worse," "The market can't go much lower," "It has to rain soon," or "Five straight sevens can't happen," and we were often wrong.

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[50] A stop order will automatically close one's position when a certain price is hit. In a "mental stop," the investor promises to himself that he will close the position when the price is hit.

The crisis was, of course, an obvious example of "a world gone mad." Surely, when prices reached $100/MWh, many people at SCL felt prices were sure to fall and that purchases at such a price would be ridiculous and a serious disservice to customers. Such a response is rational because it aligns with all of our past knowledge and experiences. However, as we have seen, things could and did get much worse. The quote used at the beginning of this chapter ("There is nothing so disastrous as a rational investment policy in an irrational world.") contains considerable wisdom and seems very applicable to the power crisis of 2000-2001.

It is, therefore, essential that loss limits be clearly defined and a set of response rules be put in place. It does not appear that those limits or rules are currently defined, nor does it appear that they were defined prior to the crisis. As a result, the organization was forced to respond on the fly – and in the chaotic world that existed in 2000-2001, that was just not possible.

SCL's Assessment

SCL has recognized this issue in its current draft of lessons learned from the crisis[51]:

> "The PMG strategy stands in contrast to the more standard marketing approach of managing to a Value at Risk limit. The former (PMG) strategy responds only to changes in forecasted position, gradually hedging open positions as the forecast changes. By design it limited hedging to a couple of months into the future. The latter strategy responds readily to changes in both price and position forecasts usually forcing *immediate hedging of all open positions* [SCL italics] within the forecast period to maintain the exposure at the set limit."

III-F20 <u>The risk management program does not adequately define measures to establish loss limits or procedures to follow when loss limits are threatened.</u>

The Need for Rigor

Some believe that chaos in the market demands flexibility and the freedom to adapt to the wildly changing environment. However, we strongly disagree. The reason for strong risk management rules is precisely to guard against low probability scenarios and to force management to cover or exit its positions, take its losses, and minimize any further damage. These are difficult actions to take especially when we are certain "the market is sure to turn around."

A risk management program that lacks discipline invites the very consequences the program is designed to avoid. Well designed policies and procedures and a strict adherence to those policies and procedures cannot be considered as optional. SCL needs to emphasize the discipline of its program, better define the rules, and assure universal compliance.

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[51] The lessons learned document is in draft form and has not been fully reviewed by management and staff. Therefore, the quote provided here should not necessarily be assumed as the approved position of SCL. Nevertheless, we believe it eloquently describes the issue.

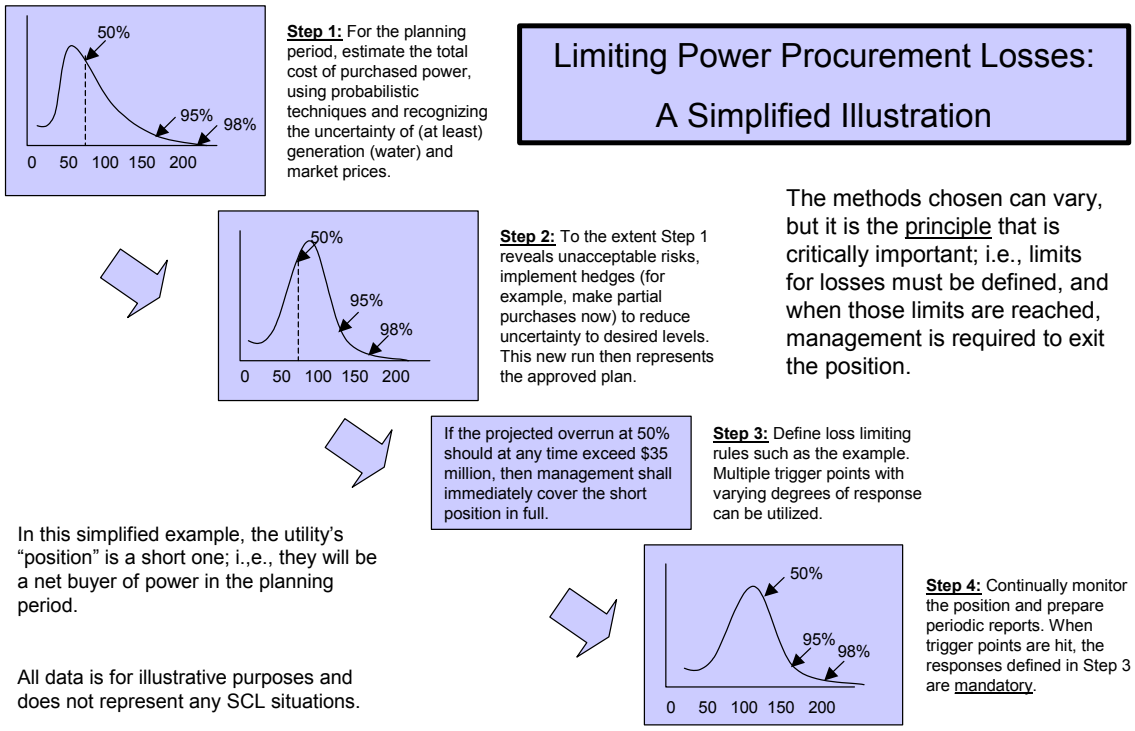
III-F21 The lack of rigid rules that bind the organization in times of major losses (i.e., require closing of positions as loss limits are threatened) is a serious problem that allowed, and perhaps forced, the organization to rely on instinct during the crisis.

A Simplified Alternate Approach

Exhibit III-5 illustrates one (simplified) option for implementing a loss-limiting strategy. In Step 1, the utility examines its procurement budget via probabilistic analysis assuming all purchases will be made in the spot market. In our example, management concludes that the risks are excessive; for example, there is a 5% chance of a $100 million overrun.

Exhibit III- 5

A Simplified Approach to Limiting Losses



In Step 2, the planning team now employs various hedging strategies in an attempt to shift the risk distribution to the left; i.e., lower the risk. They might enter into contracts now for a set percentage of the shortfall[52] and may buy a call option for an additional percentage[53]. If the resulting risk profile is acceptable, it becomes the approved plan.

Before implementing the plan, management must decide on the maximum losses it will accept. Step 3 in our example indicates that management has concluded that, under no circumstances, is it willing to exceed the budget by $35 million. It establishes a risk policy

[52] Entering into a contract now locks in the price and eliminates most of the risk associated with that amount. (Of course, the seller could still default.)

[53] In this case, a relatively high strike price (e.g., $100/MWh) might be chosen to minimize the cost (premium) of the option. The utility would, therefore, be unprotected by price increases up to $100 but protected thereafter. (Notice the similarity to an insurance policy with a deductible.)

and a required procedure that all short positions in the planning period be covered when and if an overrun of $35 million is forecast with a 50% confidence level[54].

In Step 4 of our illustration, the company's short position is monitored daily. In effect, a new probability distribution is created based on that day's assessment of the market. If the trigger point is hit, the organization buys to cover its entire shortfall. At this point, the overrun is locked in preventing future losses but also preventing recovery if the market turns around[55].

Does such an approach also apply to a "long" position, such as SCL now enjoys? Definitely, but on a mirror image basis. In SCL's case, the "loss limit" would actually reflect the tolerable amount of lost revenue. In other words, if we have $70 million in budgeted revenues, we might set the liquidation point at $50 million holding the loss to $20 million.

What If?

The above discussion begs the question: What would have happened if loss limits were effectively in place during the crisis?

Unfortunately, we will never know the answer to that question – there are simply too many variables. On the one hand, we can reasonably conclude that any limits that SCL and the City Council chose to set would have been rather low simply because our perceptions in 1999 did not allow for very high prices. This argues that a large part of the damage done in the crisis would have been mitigated.

However, we suspect that the process would not have worked so easily. First, there would surely have been at least two "abandon ship" alarms: first when market prices escalated and second when the drought became apparent. In other words, SCL would have closed the short position in mid 2000 only to realize in late 2000 that the drought created additional shortfall and further losses were inevitable.

Another question is, regardless of the procedure, would SCL have had the discipline to pull the trigger? Also, would Council have had the discipline to approve the wildly above budget amounts? In retrospect, there is a chance that there would have been some hesitation, and we have already seen the consequences of that response.

We can conclude that the crisis would have been better managed if (1) a suitable loss limiting procedure were in place; (2) SCL's budgetary authority was consistent with the procedure; and (3) both SCL and the City Council were reasonably bound by the procedure

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[54] Perhaps, multiple, staged trigger points would be preferred. For example, advise City Council at $20 million, liquidate 25% at $25 million, liquidate 50% at $30 million, and liquidate 100% at $35 million.

[55] In actuality, the organization might select a more complex closing transaction that would cost more but would still allow the company to benefit somewhat if prices dropped precipitously.

and fully understood its derivation and critical importance. Since none of these conditions existed, one can only speculate as to the outcome.

However, the "lesson learned" here is not in question – the three conditions need to be put in place promptly.

III-R9 Move promptly to establish a loss-limiting process including the institutional changes to make it successful, such as creating budget flexibility, defining the role of the City Council, and instituting measures to assure that SCL and the City Council are willing and able to be bound by the process. (Refer to Findings III-F21 and III-F21.)

1 3 Oversight

The risk management oversight issue encompasses two groups: the RMC and the City Council.

The Risk Management Committee

We were impressed with the functioning of the RMC. It is far more involved than similar organizations in other utilities. This has many advantages including:

- Management is close to the action developing a sound knowledge of trading and the market that many management teams lack.
- The weekly RMC meetings provide a great vehicle for dialogue allowing members and staff to vent concerns, challenge assumptions, play "what if" games, and, in general, keep on the same page.
- The diversity of the meetings, including the different functions represented on the RMC and the inclusion of staff at the meetings, provides real synergies.
- Executive participation assures common direction, universal understanding of strategies, and confirmation that this is really important.

III-F22 The RMC is highly engaged, hands on, dedicated, and functions in an exemplary manner.

Given these positive characteristics, we are reluctant to suggest any changes. Accordingly, we will limit our comments to simply a cautionary note. RMC has serious oversight responsibilities that can be compromised if it becomes too close to the action. It is easy to become the implementing organization versus the governing organization and, thereby, to become subject to a different set of priorities. RMC should remain loyal to its oversight objectives including its responsibility to assure that a strong risk management program is in place and functioning.

III-F23 The RMC needs to take care that its aggressive participative style, which is a very positive strength, does not compromise its primary mission - oversight.

City Council

There are many governance issues associated with the City Council's oversight of SCL, and these are discussed in detail in *Chapter V*. We will therefore limit our remarks here to the narrow confines of the risk management program.

Few will disagree that the City Council has serious responsibilities relating to the risk management functions, yet these responsibilities are not well defined and Council's interface with the risk program is unclear. In fact, it appears that there may be differences in expectations. For example, SCL has expressed the following concerns:

- Council's reviews of utility risk matters have at times been cursory and uninformed.
- Council has not adequately considered risk management issues in its resource acquisition decisions.
- The Council did not give specific directions on hedging strategies or methods.

Embedded in these concerns is surely some differences of opinion on what the Council's role actually is. The D&T audit provided some valuable insights and recommendations here. Unfortunately, several of these recommendations were rated as "2" under the D&T system and did not receive adequate follow-up[56]. (Please refer to the section on "The Deloitte & Touche Audit" earlier in this chapter for more detailed analysis). Given that Council's role is now poorly defined, as it presumably was at the time of the audit, these recommendations probably should have been assigned a much higher priority.

III-F24 The obligations of Council vis-à-vis its risk management oversight responsibilities are not defined. Further, there are differing expectations among various stakeholders at to Council's role in the overall management of risk.

III-F25 The D&T audit provided a good framework for defining Council's risk management responsibilities. Unfortunately, these recommendations did not receive appropriate follow-up.

Specifically, the D&T suggestions for Council responsibilities and our recommendations for follow-up are as follows:

[56] Recommendations rated as "2" were characterized as suggestions that, while not essential, would align SCL's activities more with Best Practices."

D&T City Council is responsible for understanding the realm of Risk Management activities as well as associated risk/return attributes.

III-R10 Conduct a limited workshop, perhaps one day long, for the City Council in which fundamental concepts of risk and its management in the power markets are covered. An annual update of perhaps a few hours should also be held to advise Council of then-current trends in the industry and their potential impact on SCL. (Refer to Findings III-F1 and III-F25.)

D&T City Council is responsible for approving corporate policies, guidelines, and procedures to ensure that proper risk management controls are in place; approving the framework for measuring and monitoring risk; and reviewing and updating these policies.

III-R11 Establish a limited set of documents that govern the risk management program which are clearly defined as subject to approval and periodic review by the City Council. The emphasis should be on policy matters not procedural details. The danger of "burying" the City Council is real here, and the parties must agree on what is really important as well as the most efficient vehicle for obtaining City Council approval. (Refer to Findings III-F24 and III-R13.)

D&T City Council is responsible for ensuring clear lines of authority and responsibility for assessing, measuring, and managing risks.

This issue was rated as a high priority by D&T and was dealt with by SCL. The definitions of responsibility are contained in the Risk Management Manual although they are out of date due to organizational changes. The City Council's programmatic responsibilities will include insistence that such documents remain current.

The above recommendations should be sufficient to establish a meaningful programmatic role for Council. However, Council's oversight and interest will also apply to ongoing management activities, especially those that determine and enforce loss limits. As SCL hopefully improves its program to more effectively define loss limits and mandated responses, Council needs to participate in the process and then receive suitable reports that monitor SCL's positions as limits are threatened.

III-F26 In addition to its programmatic responsibilities, the City Council has a responsibility to monitor risk management activities on an ongoing basis. In particular, Council needs to be directly in the loop, via a formal process, in times of stress when major losses are threatened.

We will discuss later the need for the utility to make better use of risk analysis tools in its decision-making processes. This same conclusion applies to the City Council. The actions of the Council can obviously have a direct impact on the utility's risk position. Furthermore, there is some feeling among SCL personnel that Council's thought processes

give insufficient weight to the complexities of risk analysis in favor of other priorities such as environmental matters[57].

III-R12 The City Council needs to increase its sensitivity to risk considerations when making decisions related to SCL. The actions of Council can directly impact the utility's risk positions, and such actions should not be undertaken without suitable analysis and communication with SCL. (Refer to Finding III-F26.)

As a final note on Council's role, we refer to discussions in *Chapter V* on the current difficulties in working relationships and communications between SCL and the City Council. Needless to say, continuation of those problems could preclude Council from an effective oversight role and negate the benefits intended by these recommendations.

III-F27 The current working relationships between SCL and the City Council seriously impede, and perhaps preclude, Council's ability to faithfully discharge its risk management responsibilities.

Performance Measurement

The measurement of performance in a marketing organization is extremely complex. While a typical trading function will rely primarily on profit and loss (P&L), this reliance has always produced questions, and it is only recently that the true depth of its inadequacy has become apparent. The "best in class" by our traditional measures are now dead or critically ill – ample testimony to the flaws inherent in the industry's primary measuring stick.

Unfortunately, the performance measurement challenge may be even more difficult for an organization like the PMG, which starts from an established long or short position, thereby eliminating even a straightforward P&L method. SCL has attempted to solve the problem via a cost / benefit approach, which is how the organization was originally justified. However, this approach is equally flawed on a number of grounds. First, the "earnings" of the group are difficult to determine with confidence. Incentives to inflate earnings, either by aggressive transactions or aggressive analysis, can be counterproductive.

Second, recalling our "beating the market" myth, any performance measures predicated on outperforming the market will be suspect, and this is a fundamental component of SCL's method.

Third, as we have noted, elimination of the PMG functions is not an option, therefore, justifying their creation and continuing existence on cost / benefit analysis is inappropriate from the start.

[57] Examples given include the Earth Day resolution, the sale of Centralia, and the Stateline contract.

III-F28 The current practice of measuring PMG's cost / benefit is flawed and is not appropriate for judging the group's effectiveness or its future.

For purposes of this report, we will segment the measurement challenge into two components: (1) measures needed by management for their day-to-day responsibilities and (2) a broader set of measures needed by the oversight functions, in our case the City Council. D&T focused on the former; we will concentrate on the latter.

Whereas we can be confident in questioning the current performance measures, it is not so easy to find a viable replacement – there are no standard, off-the-shelf solutions. The reporting scheme needs to be tailored to the organization's particular circumstances and will vary as a function of marketing strategy, degree of activity, governance requirements, risk position, type of instruments, and many other factors. The design of such a scheme is, therefore, well beyond the scope of this project. On the other hand, some suggestions can be offered to assist the City Council in starting the process of defining its needs.

We will begin by noting a number of guiding principles. First, it is important to focus on process more so than other parameters, and in some cases more so than actual results[58]. Second, reports must be simple and clearly presented. For example, we favor a "traffic light" approach that highlights key issues with a red-yellow-green designation, instantly alerting the reader to problems of interest. Third, the goal of simplicity can be elusive, therefore, the engagement of the reader is a must. Fourth, the topics must align precisely (no more – no less) with the risk-related interests, objectives, and accountabilities that are the responsibility of the oversight group.

In general, we can define four areas of primary interest: (1) strategic; (2) programmatic; (3) compliance; and (4) execution or results. The oversight functions associated with each may require a different approach. For example:

- The strategic area will require an initial document specifying the marketing and risk strategy. This document would require Council approval. Periodic reports would then be needed to track implementation of the strategy, highlight deviations from the plan, and submit any changes for approval.

  Of principle importance here is the risk strategy. How will SCL limit the damage from any unexpected changes in the market? How does the City Council interface with that process?

- The programmatic area will be covered by the Risk Management Manual, which also should be approved by the City Council. The Council will likely need help here in assessing the adequacy of the program and will similarly need assistance to evaluate revisions to the manual.

[58] Recalling our earlier discussion of "good decision – bad outcome."

- Compliance will be covered by periodic audits with concluding reports to the City Council. These might include the annual D&T financial audit, special reviews such as conducted by D&T in 2000, selected reviews by the City Auditor, and periodic assessments by SCL's Risk Manager. Council and SCL should develop a mutually agreeable plan that assures compliance through a series of such audits.

- The execution of the program will be measured by a series of reports tailored to the objectives and interests of Council. Typical parameters might include:

    - A mark-to-market metric that provides a snapshot of the current value of the portfolio[59] and relates that to budget.

    - Gains and losses from short-term trading activities. This would address the "other" transactions from Figure III-1.

    - Definitive risk management status including quantifiable risk calculations and results, value at risk measures[60], a "degree of confidence" assessment, and risk methods and assumptions used. Techniques applied may include value at risk, price sensitivity analysis, and stress testing.

    - Analysis of credit risk, listing major counterparties and the degree of risk. Such reports should acknowledge that the risk associated with a counterparty can exceed the value of the contract[61].

The above are offered as examples only. A joint effort by SCL and the City Council to define reporting requirements in detail will be appropriate.

III-R13 Develop reports and processes that allow the City Council to effectively meet its oversight objectives. SCL and Council, perhaps with the facilitation of a consultant, should work together to address the need for appropriate information flow. (Refer to Findings III-F26 and III-F28.)

RISK MANAGEMENT AS AN ELEMENT OF STRATEGY

The significance of risk management in utilities has grown well beyond its important role in trading and marketing. Although only a handful of utilities have raised risk management to an enterprise-wide endeavor, most have applied the principles to their strategic decision-making.

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[59] In this context, "portfolio" might be defined as the short open position for which purchases are required or the long position for which sales are contemplated. "Mark-to-market," for purposes of this discussion, is the process whereby the market value of the portfolio is updated daily.
[60] Value at Risk, or VaR, is a parameter defining the amount of risk in the portfolio at a given point in time. It might be stated as, "There is a 98% confidence level that our power procurement costs will not exceed budget by more than $30 million."
[61] For example, if a supplier defaults, the cost to replace the power will be a function of the market price.

SCL has obviously taken steps in this direction, routinely applying probabilistic methods to its financial projections. The organization, as well as other stakeholders, has become accustomed to the terminology of "confidence levels" and the relation to risk. Fortunately, SCL has established a base of capability in this area that represents a real asset.

Our observations suggest, however, that SCL's use of these techniques is not consistently applied. For example, the prudence of any new generation addition is a function of the presumed market prices for capacity and energy. Given the uncertainties in today's markets, as SCL and others have learned the hard way, a deterministic approach is inherently flawed[62]. Yet, recent projects and analyses have been analyzed and justified on that basis.

Similarly, the utility's Strategic Resource Assessment (SRA) is particularly susceptible to uncertainties in many variables. We understand, however, that risk analysis has not been a structured part of this assessment and does not play a substantial role in the strategic planning process.

SCL will benefit greatly from a more structured approach to decision-making that effectively incorporates sophisticated assessments of risk into the process.

III-F29 SCL has considerable risk analysis capabilities that represent a real asset. These capabilities, however, are not routinely applied to important decision processes including strategic planning in general and the SRA in particular.

III-R14 Establish a structured process for decision-making including strategic planning, which routinely incorporates risk analysis. Risk should be included as an element of discussion in all important decisions, especially those presented to the City Council. (Refer to Finding III-F29.)

D. SCL'S POSITION IN THE INDUSTRY

In general, there is a wide disparity among market players in terms of the size and shape of their organizations. Some firms built trading organizations staffed in the hundreds – others have one or two people. Some firms acquired supporting infrastructure in the hundreds of millions of dollars[63] – others took a more "back-of-the-envelope" approach. Some firms built elaborate facilities – others "rented a chair" on someone else's trading floor. And some firms traded every instrument known to man, and a few unknown – others took a highly conservative posture limited to transactions directly tied to their physical assets.

The conclusion is that all of these features will be determined by the individual utility's business strategy, which in turn is established by many other characteristics such as the unit's mission, its tolerance for risk, performance expectations, and the organization's

[62] As discussed earlier under "probabilistic analysis," the deterministic approach settles on a single estimate. It does not lend itself to strong analysis of uncertainties and the realistic range of outcomes.
[63] In recent years, Enron's IT department had an annual budget of several hundred million dollars.

personality. Municipal utilities generally share many of these characteristics, therefore, it is not surprising that their basic approach to the power markets is somewhat similar. However, the specific tactics employed by public power utilities in marketing and risk management have varied widely.

We have worked with a number of public power entities in establishing trading operations and risk management programs. The approach of these firms has been generally similar to SCL's. On the other hand, a brief survey of several municipals that might be considered SCL's peers reveals some relatively weak programs. SCL is surely positioned well beyond most of the firms in the peer group.

In a positive sense, then, and notwithstanding the weak performance of some of the peers, we find SCL's power marketing and risk management capabilities to compare well with other municipal utilities. The creation of PMG, the initial staffing and startup, the constraints placed on the group, the structure of the risk management program, the relationships with other organizations, and the degree of growth in its first few years are all typical characteristics.

We will note that the challenge for a municipal utility in designing and starting up a power marketing function is difficult. Stated bluntly, a utility like SCL simply cannot afford to build the kind of capabilities that a much larger utility can. However, with time, some of those capabilities may become more necessary, and, at that time, alternates to developing enhanced capabilities will need to be considered.

One alternative that might eventually prove attractive to SCL is to collaborate with others in the region to form a large, highly sophisticated marketing organization. SCL, as the largest municipal in the region, is well positioned to take the lead role in such an endeavor. A similar organization, The Energy Authority (TEA), was formed by public power utilities in the southeast and is one of the few utility alliances that has succeeded. A TEA-type organization in the northwest would provide SCL and its partners with a scope large enough to permit development of a truly world class organization.

III-F30 SCL compares well with other municipal utility peers with respect to risk management.

III-F31 SCL may need to consider other growth options when and if a quantum change in its capabilities is required. A TEA-type alliance, with SCL in a leadership role, may be particularly attractive and beneficial.

E. RISK MANAGEMENT AND THE CRISIS

We have discussed elsewhere that the PMG and its associated risk management functions were quite young at the start of the crisis. This is not offered as an excuse for any shortcomings but rather as recognition that such organizations do not reach instant maturity overnight.

This report, as did the D&T review, has identified a number of shortcomings with SCL's risk management program that exist today and also existed before and during the crisis. The major deficiencies all contributed to some extent to the difficulties in managing the crisis.

Consider, for example:

- Loss limits and a supporting procedure, which are essential and standard components of an effective risk management program, may have helped SCL mitigate the impact of the crisis.

- A more rigorous and structured application of SCL's extensive risk analysis capabilities to important decisions may have resulted in alternate decisions or, at least, provided management and Council a better understanding of the magnitude of its risks. Examples include the decision in the second quarter of 2000 to replace the Centralia capacity for only a limited time and the decision in the third quarter of 2000 to proceed with only minimal forward purchases.

- The lack of an effective Risk Management Manual, the foundation of the risk management program, raises serious doubts as to the viability of the program as a whole. Perhaps a more rigorous and disciplined approach to risk would have helped management during the crisis.

- The seemingly weak level of communications between SCL and the City Council seem to have contributed to an awkward and, in retrospect, confusing decision-making process. Even today, the basis for some decisions remains unclear with continuing dialog on what the City Council "really wanted" or what SCL management "really believed." The analysis supporting some decisions seemed to flow from the decision rather than vice versa. We, therefore, suspect that the decision-making process was flawed although this does not automatically lead to a wrong decision. Again, any impact on the crisis is speculation.

- The potential for extreme outcomes does not seem to have been considered until too late, but there were warnings that seemingly ridiculous prices could be reached. Such warnings included the Midwest crisis of 1998; warnings from the California Energy Commission and the NWPPC in 1999; and the California spikes, another NWPPC warning, and Council Member Compton's questions, all in 2000. Although none of these could be seen as indicators of what really was to come, each argued for stress testing at a minimum. SCL did eventually test these extremes, but, by that time, the answer was unmanageable.

Despite the above shortcomings, we cannot say for sure that a more prudent approach would have saved the day. To the contrary, the magnitude of the crisis was such that it theoretically could have overwhelmed any organization. The real test for SCL now is not how it acted during the crisis but what is has learned from the experience and what steps it is taking to improve operations.

III-F32 Although there is no question that risk-related activities could have and should have been managed better before and during the crisis, there is no assurance that the consequences would have been substantially mitigated.

III-R15 SCL should become much more aggressive in analyzing the lessons learned from the crisis and implementing corrective measures. (Refer to Finding III-F32.)

F. RECONCILIATION TO RFP QUESTIONS

The Request for Proposals (RFP) for this project listed a number of specific questions associated with the risk management function. Although these are answered throughout this Chapter III, the following cross-references and clarifications are provided for the benefit of the RFP authors in order to assure that all of their questions were indeed covered. Please note that these are simplified answers designed to "close the loop;" the reader is encouraged to consult the more detailed explanations in this chapter.

- What lessons were learned from the 2000-2001 power crisis? SCL continues to work on lessons learned analysis from the crisis. Our lessons learned are offered throughout this chapter and especially above under Section E, "Risk Management and the Crisis."
- Were SCL's basic risk management strategies adequate? In general, no. The loss limit issue and other related items as listed in Section E are important shortcomings.
- Did SCL use appropriate analytical techniques to make load and price projections? Yes, SCL seems particularly strong in its modeling and analytical capabilities. It is the application of these techniques that we have at times questioned.
- What are the range of financial and hedging tools[64] that are available? What types of measures are in place now at SCL, and what others have not been pursued and why? The range of tools is adequate for today's needs and the ultra-conservative strategy now in place. More sophisticated hedging tools will be appropriate in the future. Examples include financial instruments such as futures and options and more complex combinations of instruments to produce custom designed hedges. These more sophisticated approaches have not been pursued yet because of a desire to limit the group's activities in what are perceived as higher risk instruments.
- What approach do other utilities use to manage their market risks? Others have responded to the risk management challenge in similar ways. In fact, our limited survey of SCL's peers indicates that SCL has in some instances been more aggressive than others.

[64] We have generally used the term "instruments" instead of "tools" in this application. Obviously, both are correct.

- What tools should SCL use in managing its existing market risks? Our single most important suggestion is the use of loss limits and a supporting procedure to exit positions when the City Council-approved triggers are reached.
- What monitoring tools should the City Council use to help prevent any repeat of the current blow to the utility's health? We have suggested a series of actions to ensure City Council has the ability to effectively monitor the risk program and SCL's risk limits. It will be noted, however, that effective participation by the City Council requires engagement – there will be no simple "monitoring tools" that answer all the questions.
- Does SCL's revised Strategic Resource Assessment (upon its completion) propose a resource mix that appropriately addresses issues of risk management and portfolio balance? At this point it does not appear that risk analysis has been effectively integrated into the SRA process, but the process is still underway.

IV. OPERATIONAL ASSESSMENT

Our audit assessed City Light's debt/financial situation and risk management practices with an emphasis on suggestions for improved performance**.** This chapter provides a limited overview of a number of SCL's key management systems, tools, and policies because those are ultimately key drivers in the success of SCL's financial and risk management practices. It specifically addresses shortcomings and does not dwell on areas where management tools are being appropriately applied. Throughout this chapter we also list factors that any utility should consider when assessing its operations. An overall matrix of how well SCL meets our expectations for operations is provided at the end of the chapter, and it identifies some of SCL's positive results.

A. PLANNING

OVERALL STRATEGIC PLANNING

IV-F1 SCL's formal strategic plan has not been fully updated since 1996, despite efforts in 1997-1998.

One of our initial information requests to SCL was for a copy of the latest strategic plan and one of our initial interviews was with the Director of Strategic Planning. We learned that SCL has not adopted a formal strategic plan since 1996. To be clear, we define a strategic plan as an overall corporate effort that identifies a clear and concise strategy that is practicable and well defined. It includes both strategic and tactical objectives and gives all branches a clear message as to their roles, responsibilities, and both short-term and long-term goals and objectives. The last SCL strategic plan was completed in 1996. A brief review of this plan shows it to be lacking the thoroughness one would look for; however, it did provide some direction for each SCL branch.

A significant attempt was made to update the plan in 1997-1998; however, the plan was never completed. This effort included collaboration between the Mayor, the City Council, City Light, and its customers. Numerous stakeholder sessions were held, a work program was defined, performance measures were identified, and financial unbundling of each major function within the utility was completed. However, the final strategic plan was never completed, presented, or implemented.

During discussions of the strategic plan we were referred to the Strategic Resource Assessment and the Financial Plan. We reviewed these plans. However, while each of these plans is important, SCL senior management acknowledges that neither should be considered an overall strategic plan.

In reviewing various documents that SCL has produced we did identify a number of reports that refer to a "mission statement" and "vision statement." In fact, two such statements recently developed by SCL deserve comment. The Mission Statement included in the City

of Seattle 2002 Proposed Budget[65] stated, "The mission of the City Light Department is to provide our customers with the lowest cost, most reliable, and most environmentally responsible electricity in Urban America;" while the City of Seattle web site Fact Sheet dated 3/1/02 states "The Utility's vision statement is to become 'the most customer-focused, competitive, efficient, innovative, and environmentally responsible municipally owned utility in the U.S.'"

A number of ideas can be inferred from these two statements. Both statements use terms such as lowest, best, and most to define specific targets. While these statements read well to the public they put enormous, perhaps unrealistic, burdens on SCL to achieve if they are taken seriously. For example, lowest cost has meant deferring the cost of the Capital Improvement Program (CIP) through increased debt; most reliable has meant an increasing CIP; and environmentally responsible has resulted in high cost decisions such as the sale of the Centralia coal-fired power plant and the commitment to the Stateline Wind Project.

We question whether any objective can be achieved without a comprehensive strategic plan that establishes clear and concise operational, financial, and tactical targets. We also raise the question of whether the customers of SCL would really want to achieve all of these missions or visions if the real costs and associated risks were identified.

IV-R1 Develop a long-term strategic plan that clearly defines the wants of SCL's customers, identifies the potential costs of implementation, and establishes clear, concise, and attainable targets for each SCL branch. (Refer to Finding IV-F1.)

This is a significant and defining project for any organization and it must be done in a careful manner with input from all key stakeholders. SCL management contends that the 1997-1998 initiative described above met the intent of this recommendation. If that is the case, SCL should not have great difficulty complying with the steps identified below.

There should be a number of steps undertaken before the strategic plan is implemented. These include:

- Feedback from stakeholders[66] – A formal process should be implemented to ascertain just what the ratepayers of SCL want. Surveys, meetings, and other forums should be used to assess responses to questions such as:
  - What financial and reliability risks are customers willing to accept to maintain low rates?
  - Do today's customers understand the impact of deferring costs by continuing to increase current debt levels?
  - How large an environmental premium are they willing to pay?
  - Do they want the most reliable system in the country at any cost?

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[65] Page 353 of 2002 Proposed Budget.

[66] We did not evaluate SCL's 1997-1998 stakeholder process. Given the changes that have occurred since that period, we believe another stakeholder process is needed. SCL senior management indicates that SCL's 1997-1998 process included the elements listed.

- Agreement with the City Council and the Mayor on SCL's Mission and Objectives– There should be a clear agreement on what its overall mission should be based on feedback from customers and the realities of SCL's financial condition. Well defined performance measures that cross all functional areas should be developed and realistic goals should be established for each area. We reviewed SCL's Managing for Results performance measures. While they are worthwhile, we believe there are many other industry standard performance measures that SCL should incorporate into its strategic plan.
- Inclusive internal process - Establish an on-going process that develops the utility's mission statement and supporting branch goals and objectives in an integrated fashion. This process should promote teamwork among SCL's branches and focus all employees on achieving the same goals.
- Tactical implementation - Each branch should examine its operations and develop appropriate goals and objectives that support the utility's mission, and establish a set of metrics for measuring its effectiveness. These metrics should be tracked over time and compared to other utilities to ascertain SCL's relative position (benchmarking). According to SCL senior management, SCL currently benchmarks its generation activities and will try to benchmark its distribution activities.

B. PERFORMANCE METRICS

During the last 15 years electric utilities have increased their use of operational performance metrics to measure and compare system performance within the utility and with peer groups. The scope of this audit did not permit us to review every SCL branch's metrics. However, we reviewed the Distribution Branch's efforts to monitor its performance through performance metrics and its use of the results for decision-making. Further, during a meeting with SCL senior officials to verify and review this report, SCL provided additional details on metrics used by SCL.

A number of very specific metrics have been established for measuring performance of distribution systems within the power industry in recent years. Standard measures for reliability include: CAIDI (Customer Average Interruption Duration Index), SAIDI (System Average Interruption Duration Index), SAIFI (System Average Interruption Frequency Index), and MAIFI (Momentary Average Interruption Frequency Index).

CAIDI is measured in minutes and calculates the average time required to restore service to a customer after an interruption. SCL counts any interruption of service for more than one continuous minute as an outage. SAIDI is also measured in minutes and represents the average interruption duration on a system-wide basis. SAIFI represents the average number of outages which are longer than one minute. Finally, a recent measure introduced is MAIFI, which measures the number of momentary outages a customer experiences.

These reliability measures are influenced by several factors including, among other things, the customer density of the service territory, the vegetation in the region, and the weather.

Since weather has a significant impact in many service territories, reliability targets both including and excluding storms are often established.[67]

A utility manager can use these results in a number of ways. Comparisons to peer groups give an indication of the overall performance of the utility. Comparisons over time can indicate deterioration of reliability, and variations between different geographic or operational areas of a utility can provide evidence of imbalances in the use of resources. Finally, analysis of specific load centers, feeders, or regional areas provides key information for making decisions on Operations and Maintenance (O&M) and capital budgets.

IV-F2 SCL's System Control Center prepares a broad range of performance metrics for use by management and the Distribution Branch, however most of the results are not communicated outside SCL.

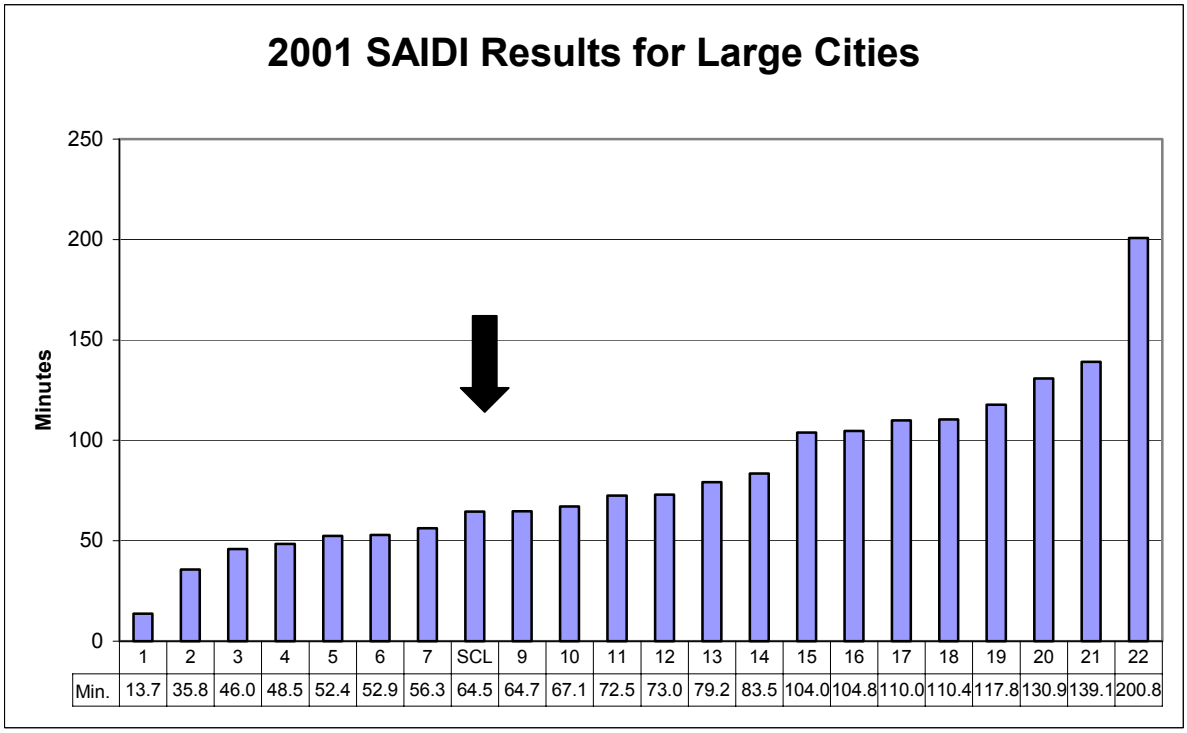
During the verification process for this report, we were provided with the following reports that included many of the metrics we would expect to see at a utility the size of SCL. These included monthly and rolling 12 month average data on SAIDI, CAIDI, SAIFI, and MAIFI. We were also made aware of a broad range of performance data prepared by the Generation Branch. Much of the information is not provided to outside groups. According to the SCL Superintendent, SCL reached agreement with elected officials about the information they want to review. It is apparent that SCL is capable of producing the metrics needed for communicating with all parties and managing its resources effectively. However, SAIDI is the only metric that is widely reported in SCL's public documents.

IV-F3 The current reliability of SCL's distribution system appears to be excellent based on available industry data.

In addition to the reliability data provided to us by SCL, we gathered some national information that could put the SCL reliability numbers in perspective. On a recent assignment we were provided with a survey from year 2001 of SAIDI for 21 large cities. Seattle was not a participant in this study; however, comparing SCL's results against the survey shows that it ranks as the eighth best of 22 utilities. The average for the 21 of the utilities was 84.0 minutes.

[67] The SCL Superintendent stated that SCL has reliability targets including and excluding storms.

Exhibit IV- 1



	1	2	3	4	5	6	7	SCL	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Min.	13.7	35.8	46.0	48.5	52.4	52.9	56.3	64.5	64.7	67.1	72.5	73.0	79.2	83.5	104.0	104.8	110.0	110.4	117.8	130.9	139.1	200.8

After being provided with additional distribution system reliability information, by SCL, at our verification meeting, we determined that:

- A preliminary report on outage statistics showed SCL had a 12 month average through September 30, 2002 of:
  - SAIDI – 63.0 minutes of outage per customer per year versus 84 minutes for the 21 company survey;
  - CAIDI – 55.0 minutes of outage per affected customer per outage per year versus 93.0 minutes for the 21 company survey;
  - SAIFI – 1.15 outages per year per customer versus 1.16 for the 21 company survey; and
  - MAIFI – 0.447 momentary outages per customer per year versus 4.0 for the 21 company survey.

IV-R2 Review the performance metrics available for all branches and if necessary develop new ones. These metrics should be available at all times to SCL employees and provided on a regular basis to the City Council and the Mayor. (Refer to Findings IV-F2 and IV-F3)

By implementing the following steps SCL should improve its performance and communications with managers, employees, City government, stakeholder groups, and customers:

- Review what performance metrics are being used in each branch and determine whether they are appropriate. Collectively these performance measures should address safety, reliability, employee satisfaction, cost control, customer satisfaction, and regulatory compliance. They should help to determine whether the utility's objectives are being met and provide measures for each of SCL's tactical policies.
- Work with the City Council, the Mayor, and key stakeholder groups to ensure that they understand the definition and relevance of each metric.
- Develop peer references through surveys or by joining user networks that track and measure results.
- Develop performance targets that are realistic and support SCL's strategic plan.
- Utilize results for budgeting, resource allocation, and employee performance appraisals.
- Provide regular (we suggest quarterly) reports to the City Council, the Mayor, and key stakeholder groups with explanations of significant deviations, including plans for addressing any issues that arise.

C. BUDGETING

OPERATIONS & MAINTENANCE BUDGET

We reviewed SCL's 2002 approved Operations & Maintenance (O&M) Budget as well as its revised cost reduction O&M budget plan. Due to time and scope constraints we did not conduct a detailed analysis of each budget item. Ideally, we would have reviewed historical resource requirements, overtime levels, responses to performance indicators, and individual branch performance over time and made comparisons to peer groups. However, we can provide some general comments.

IV-F4 The O&M budget has been relatively level over the last few years with no major initiatives undertaken to determine the optimum budget level.

There are a number of facts that support this conclusion. Non-generation O&M expenses went from $94 million in 1991 to $107 million in 2001, an increase of 1.2% per year. During this time inflation averaged 2.8%. During the same time the number of customers increased from 331,457 to 348,812 or by 0.5% per year. While increases in budget were less than inflation and customer growth added work, we have observed that during the last ten years electric utilities have experienced very large increases in productivity, resulting in significant reductions in personnel. Some of the industry-wide changes that have reduced O&M budgets are as follows:

- The advent of personal computer technology, sophisticated data collection equipment, energy management systems, outage management systems, and other productivity tools.
- The use of out-sourcing and contractor support for peak workloads.
- Improved control of inventories and sharing programs with neighboring utilities.

- Sharing of crews between neighboring utilities.[68]
- SCL senior officials provided us with a list of technology tools that were or are currently being implemented to improve performance. Further, SCL officials stated that there have been significant inroads in reducing crew sizes. SCL indicated that there have been significant inventory decreases. Generally such performance enhancements should have had a significant impact on SCL's O&M budgets and staffing.
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- Senior SCL officials have indicated SCL will try to identify other utilities with whom shared purchasing or sharing of resources makes sense.

IV-F5 <u>The Budget Reduction Plan implemented in March 2002 and proposed for the 2003 budget should result in improved O&M cost control.</u>

We reviewed each of the specific cost cutting initiatives in the 2002 Budget Reduction Plan. In addition, we discussed the short-term and long-term impact of these initiatives with the Deputy Superintendent of the Distribution Branch. A number of observations can be made.

- The $13 million in O&M reductions amount to an 8% reduction from the approved 2002 budget. Given that there have been no significant reductions over the last few years, this does not appear to be a significant cut. Further, almost two-thirds of the savings are non-labor costs.
- SCL senior officials have indicated that the proposed 2003-2004 budget reflects a continuation of many of the cuts made in 2002.[69] Further, the funding for unfilled but open positions has been cut.[70]
- In the same meeting, SCL senior officials indicated that the CIP reductions will also be carried forward, with additional cuts made as further analysis on various projects is completed.

IV-R3 <u>Conduct a detailed analysis of the O&M Budget and the Capital Improvement Plan to determine optimal levels and options for future financial planning.</u> (Refer to Findings IV-F4 and IV-F5.)

We recognize that the budget reduction plan was done over a short period in response to a budget shortfall. Secondly, SCL has had little time to really understand the details of the budget reduction plan, including some of its potential weaknesses. Finally, we understand the importance of the ongoing 2003 budget discussions. Therefore, once the City Council and SCL management complete the current budget and details are known about revenues from off-system sales and projected water conditions, the following should take place:

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[68] SCL senior officials stated that other regional investor owned utilities that cut staffing have requested assistance from SCL during emergencies. In our opinion, such sharing arrangements can be cost effective.

[69] The City Council is analyzing SCL's 2003-2004 budget request as this report is being completed.

[70] It should be noted that the cuts made in SCL's budget for tree trimming in 2002 will be reinstated for fear of impacts on reliability.

- A task force of SCL, City finance personnel, City Council advisors, and, perhaps, outside personnel or consultants should take a very hard look at SCL's O&M and CIP budget. It is time for a bottom-up analysis that challenges each cost and requires justification and support.
- Appropriate performance metrics should be identified and implemented in conjunction with the task force effort to ensure that appropriate feedback is being received about the impacts of the budget changes.
- This task force should review current SCL branch metrics to determine whether the metrics identify quantifiable objectives and measures of performance. Peer group data should be collected and used to see how SCL compares with its peers. Targets should be established that are reasonable and achievable. In our opinion, unless there is a mandate from ratepayers to be the "best in class," cost-effective and achievable targets should be established for SCL. Budgets should be based on this information.
- A standard report on O&M expenditures, with information agreed upon by all parties, should be prepared by SCL and reviewed every quarter by the City Council and the Mayor.

CAPITAL BUDGET

IV-F6 SCL's capital budgeting process does not consistently utilize an adequate level of justification for approval of new projects in the long-term budget and financial model.

Vantage reviewed a number of SCL documents used to support the original and revised 2002 capital budget. In particular, we reviewed the support for the Distribution Branch's budget. A number of facts caught our attention. There is a great deal of paper describing the need for capital projects with many charts showing trends over time. However, we found formal analytical tools were not consistently being used to justify each project. In meetings with SCL management during the report verification process, we learned that the current estimates of distribution capacity expansion are very preliminary. SCL will review the estimates using current load growth and economic information to arrive at the real costs.

When we reviewed a number of large projects in the Generation Branch we discovered that adequate analysis was being done and preliminary estimates of large projects such as the Boundary Dam Upgrade were well analyzed and completed at costs below original estimates.

In discussions with SCL senior officials we were told that the Distribution Branch has not yet developed the level of sophistication achieved by the Generation Branch, but that efforts were underway to determine more accurate projections of potential requirements and associated costs for upgrades to distribution capacity.

Today, given the competitive environment in the utility industry, companies must rigorously analyze all projects suggested for inclusion in capital budgets to keep costs and rates as low as possible. In particular, utilities today are cognizant of the many factors that can impact the need for system expansion. These include:

- Economic downturns often result in growth curves being lowered significantly. (SCL's current load growth expectations reflect this.)
- Conservation and demand side management help avoid capacity increases.
- Distributed generation (on-site generation, e.g. with fuel cells) may help mitigate capacity and transmission additions in high load pockets.
- New technologies may permit upgrades of existing substations.
- New financial tools for quantifying the costs and benefits of capital projects are available to assure management that only well qualified projects are included in capital plans.
- The risk of corporate financial problems is weighed by management against the cost of new capital projects.

IV-R4 Develop or purchase financial analysis tools for determining the necessity and justification of capital projects and use them to analyze future capital budgets. (Refer to Finding IV-F6.)

A number of tools and techniques are now standard within the utility industry for evaluating projects. These tools take into account safety and regulatory constraints as well as risks related to delaying projects. Once the appropriate tools are acquired and a procedure for analyzing capital projects is developed, a task force of SCL senior management, as well as City finance officials and City Council representatives, should be assembled to perform an in-depth analysis of proposed capital projects.[71]

A complete evaluation of the current capital plan is justified. The recent recession in the Northwest may well have made the current need for some of the capacity expansion plans moot. In addition, new technologies and demand side programs may alleviate expansion as well.

IV-F7 The program that requires new projects of 10aMw or greater needs review

In 2001, SCL received approval for a program in which developers of major projects would bear the cost of distribution system expansion when the increase in load was 10aMw or greater. This was done to ensure that new capacity additions were paid for by the entity requiring the expenditure. The rules regarding this policy may need to be tightened to ensure that developers do not circumvent the requirement by requesting loads slightly less than the threshold.

IV-R5 Review the rules for payments of capacity additions by developers to ensure that the policy intent is being fulfilled. (Refer to Finding IV-F7.)

SCL can do this in a number of ways. First, it can review the engineering assessment of load requirements and develop a separate conclusion as to load requirements. Second, it can set a range of time during which the developer is liable for the cost if the load exceeds the threshold. A benefit from this approach, aside from revenue collection, is that developers

[71] There are commercial packages available that can be adopted with minimal effort.

would be less likely to request blocks of new capacity above what they are likely to need. According to the Superintendent, SCL currently performs these steps and agrees that the issue of who pays for capacity additions needs careful review.

D. STAFFING

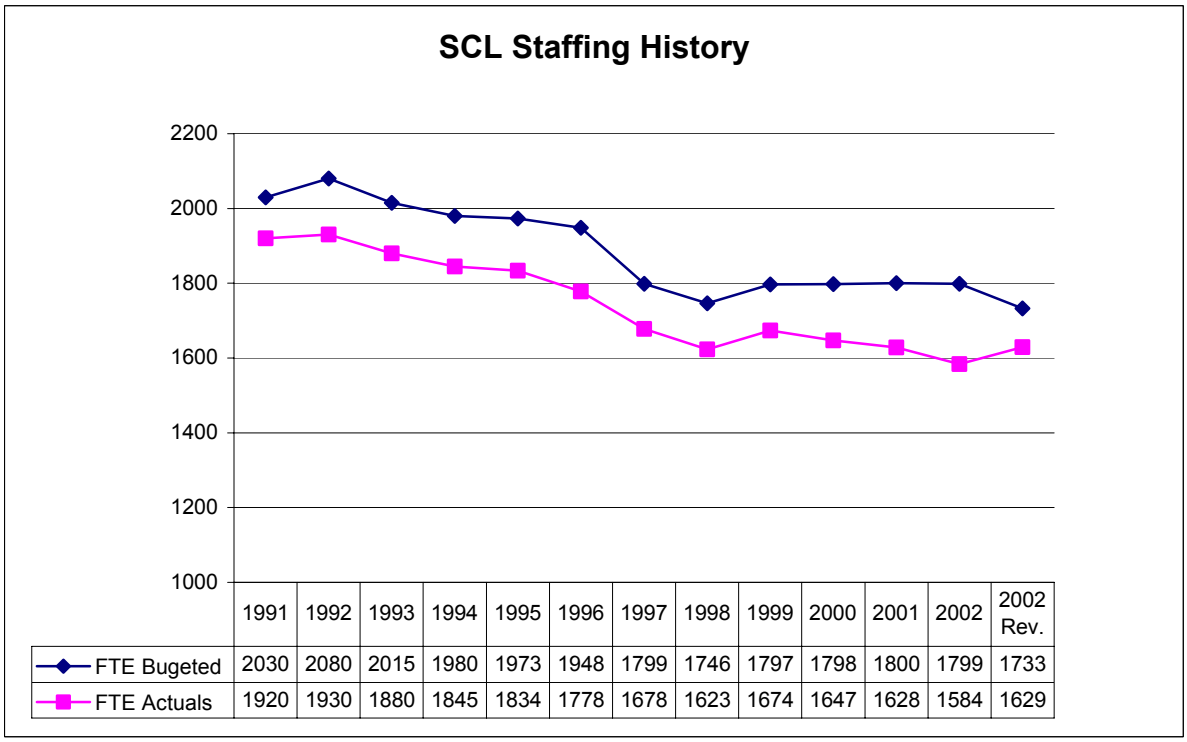
IV-F8 Budgeted staffing at SCL has remained level for the last six years after reductions in the early 1990's. Further, a preliminary analysis shows it to be relatively high when compared to other large city electric utilities.

Our brief analysis of SCL's staffing looks only at the gross numbers of budgeted and actual employees on the payroll today and over the past eight years, as well as a review of a peer group of utilities.

The graph below illustrates the following key findings:

- Budgeted staffing at SCL was the same in 1997 (1,799) as in 2002. It should be noted that the drop in staffing from 1996 to 1997 was largely due to the transfer of billing and construction management personnel to Seattle Public Utilities.
- Actual staffing, which naturally runs lower than budgeted staffing, dropped from 1,834 in 1995 to 1,584 in 2002. This is a reduction of 250 or almost 14%.
- It is noteworthy that the budgeted to actual gap rose from 139 in 1995 to 215 in 2002, possibly reflecting SCL attempts to reduce cash flow.
- SCL senior management stated that the utility started to remove a portion of the budgeted money for currently unfilled positions from its current and 2003-2004 budgets and actually began this practice several years ago.

Exhibit IV- 2



	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2002 Rev.
FTE Bugeted	2030	2080	2015	1980	1973	1948	1799	1746	1797	1798	1800	1799	1733
FTE Actuals	1920	1930	1880	1845	1834	1778	1678	1623	1674	1647	1628	1584	1629

Staffing at electric utilities has been a very important issue for the last ten years. Virtually every utility has implemented reductions that reflect both technical and competitive changes in the industry. The degree of reductions a utility can achieve is dependent to a great degree on many factors including:

- Overall cost position – If the utility has high operating costs it is often driven to make major cuts.
- Status of restructuring in the region – In regions where customer choice has started, utilities have carefully assessed the level of staff needed for safe and reliable operation of their systems.[72]
- Impact of productivity improvement – Perhaps the major reason for staff reductions is improvements in productivity. Automated control systems, improved maintenance diagnostics, improved protective relaying, data collection and telemetering, proliferation and linking of personal computers, and improved management effectiveness are examples of this productivity.

[72] The SCL Superintendent does not believe that such customer choice will happen in Washington State due to the Governor's and State Legislature's current opposition to this. .

- Labor relations - Overstaffing can often exist when management and the bargaining units are unable or unwilling to work together effectively to ensure the overall financial and operating health of the utility.
- Understanding of resources required – Even today, many utilities are unable to determine correct staffing because they do not establish and measure their performance against performance targets.
- Culture – Many utilities have a long-standing paternalistic culture that includes a full sense of entitlement and job security.

Staffing comparisons between utilities are difficult because of varying circumstances. However, we conducted a simple analysis using urban utilities that were similar in size to Seattle.[73] Using public data, we were able to find comparable data for 18 companies, including Seattle. We excluded companies that were very large, combined gas and electric, or that did not provide data. Further, it should be noted that our information is almost two years old and many investor-owned utilities (IOU's) have been very aggressive in reducing staff over the last two years.

The results show that Seattle has the third highest ratio at 5.16 employees per 1,000 customers. The two utilities with higher ratios are Tacoma, which is significantly smaller, and Jacksonville, which has a number of fossil power plants that it operates.[74] Note that this does not take into account SCL's recent staff reductions as part of its March 2002 budget reduction program.

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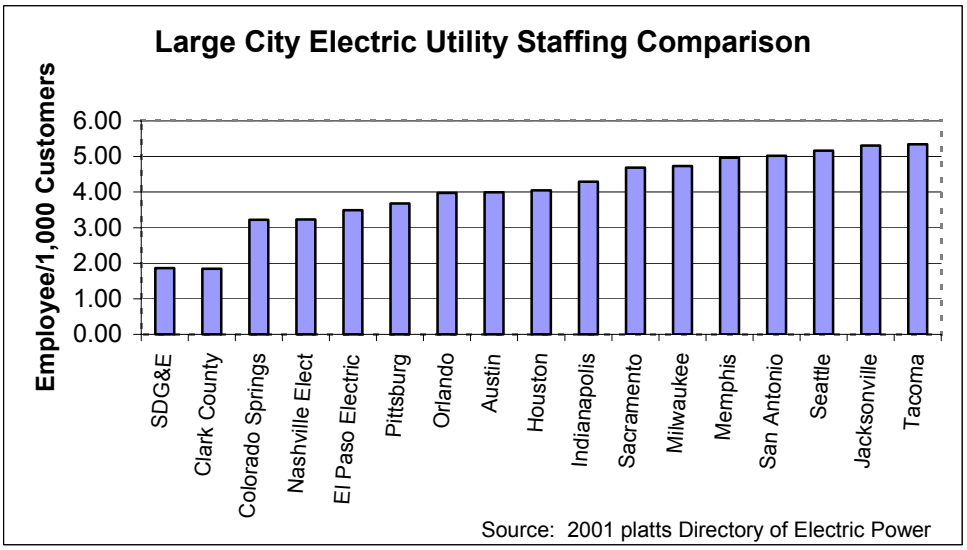
[73] Data from the 2001 Platts Directory of Electric Power Producers and Distributors.

[74] Fossil power plants have relatively high staffing due to the need to manage fuel, operate environmental controls and remove waste. In general remote hydro facilities require fewer personnel than fossil power plants.

Exhibit IV- 3



IV-R6 Conduct a comprehensive analysis of SCL staffing. (Refer to Finding IV-F8.)

An analysis should be performed that looks at each SCL branch to determine what is the appropriate staffing level. This effort should be conducted jointly with the O&M and Capital reviews we recommended earlier in this chapter.

It should be noted that since almost one-third of all SCL employees often work on capital projects, a reduction in the CIP will automatically lead to a reduction in staffing.

E. MANAGEMENT ISSUES

Ultimately, the success of an organization's management policies, procedures, and systems is dependent on the performance of the individuals in key management positions. To fully assess the quality of SCL's managers would require a much broader effort that is beyond the scope of this assignment. Nonetheless, we learned enough during our work reviewing SCL's financial situation, risk management practices, and governance to offer observations, analysis, and recommendations that may give the City Council and the Mayor insights to help them strengthen SCL.

In reaching our conclusions, our team drew upon our collective 100 plus years of experience as consultants in the utility industry. However, the people, organizations, and customers that engage with SCL on an ongoing basis can better assess whether our conclusions are valid.

IV-F9 The senior management team needs in-depth utility management experience.

The best senior management teams consist of a diverse set of individuals that includes those with fieldwork experience in the electric utility industry as well as those with senior management experience at other electric utilities. The SCL senior management team has limited breadth of electric utility experience. Many of these managers have been in place for a number of years, so it is incorrect to say that they now lack such experience. However, the roots of the team are not in the traditional utility business; therefore, they may be ill prepared for the new, "deregulated or market based" utility industry.

A better balance of experience on the senior management team will, in the long-term, be beneficial to SCL and, perhaps, essential. Some might argue that the current group may be exceptional in their management abilities but we nonetheless believe that such abilities may not be enough. This is a complex industry from a technical and business perspective, and it is becoming more so. We understand from the SCL Superintendent that many SCL employees in levels below senior management have been recruited from around the country and have utility experience outside SCL.

A review of the resumes and/or bios of SCL's senior management positions indicates that most were recruited from the City's other departments, or have risen through the ranks of SCL. Certainly there are advantages to diversity in the background of the key management team, but the current team seems to lack balance and sacrifices the most important background element – electric utility experience. The current type of organization may have some advantages but they are outweighed by the disadvantages.

We acknowledge that the current senior management team possesses a good understanding of the inner workings of City government, strong administrative skills with respect to budget adherence and reporting, and a good understanding of the local and regional political issues that apply to SCL.

However, we believe that our review of SCL's financial and risk management practices, and governance shows that the current senior management team has not fully implemented the planning and monitoring tools typically utilized by successful utility managers elsewhere. Collectively, the senior management team does not have sufficient knowledge gained through field experience, such as knowing what aspects of O&M and CIP budgets need to be challenged. We believe this knowledge is invaluable to a management team.

Many of the factors that are key to a successful management team are best observed and measured by the City Council and the Mayor. However, we would be remiss if we did not provide our observations and insight for consideration. Our analysis is based upon our review of SCL's financial and risk management practices and governance and is diagnostic in nature and makes reference to some anecdotal information. We caution City leaders and ratepayers to use these conclusions as a part of their deliberations along with their own review and knowledge of SCL's management.

IV-R7 Continue efforts to increase the level of utility expertise within SCL's senior management ranks. (Refer to Finding IV-F9.)

On October 10, 2002 the Mayor of Seattle, based on the report of his City Light Review Committee, indicated that additional efforts should be made to increase the breadth of utility experience for key positions within SCL. We concur with the Mayor. There are a number of ways the City can try to increase the breadth of utility experience within the SCL senior management team. For instance, one alternative that the City may want to consider is adding a Chief Operations Officer (COO), under the Superintendent, to manage the utility's daily operations. This would allow the Superintendent to focus on the critical regional and national issues facing SCL. In the long run, the best utilities have a strategy that seeks a senior management team that includes both home-grown talent and the best and brightest from other utilities.

IV-F10 SCL's senior management culture does not appear to be adequate for a utility facing the issues and problems identified in this report.

A major observation, and one which we do not make lightly, relates to the culture of the SCL organization as represented by its senior management team. Specifically, the culture of the utility seems to lack the "we can do better" attitude that is invariably present in high performance groups. This conclusion is evidenced by: (1) SCL's generally defensive response to issues; (2) a limited or less than enthusiastic response to improvement initiatives; (3) a tendency to dismiss criticism and attack its source, even when such criticism appears to have at least some merit; and (4) a bent towards explaining away past problems as opposed to learning from them.

This is not intended as a universal criticism, and surely many parts of the organization operate in a much different and healthier way. Further, we found some SCL managers who are deeply offended by this assessment because it flies in the face of their personal values. However, their well-intentioned opinions cannot refute the clear evidence seen by those outside of SCL including the City Council, other stakeholders, the public, and by us.

Why would an objective outsider draw such a conclusion? Consider the following:

- SCL did not publicly confront its own shortcomings from the crisis. In fact, the 2000 Annual Report seems to characterize SCL's performance during the crisis as heroic. That report contends, "any miscalculations (during the crisis) could have been disastrous, but (we) were up to the challenge." Needless to say, one could argue that regardless of the guilt of parties involved in the California crisis, miscalculations leading to the crisis were indeed made.

- SCL's internal analysis of the 2001-2002 crisis was defensive in nature. Its official chronology of the events focused on elements outside its control and railed at the failures of others.

- More than a year after the crisis there are still no formal "lessons learned" prepared by the organization. An effort has been underway in this regard, and the current draft of the document suggests that much time and effort has been expended. Again, the document, at least so far, is long on rhetoric and short on self-analysis. It represents a history of the crisis focused on blaming others far more than a critical self-assessment with an eye towards "lessons learned."

- SCL readily dismissed much of the external criticisms relating to the crisis as inappropriate. We are unaware of a positive response to any of the external criticisms, even though those analyses surely made some correct observations. The Seattle Times' series and the Municipal League observations seem to be two legitimate pieces of work that deserved a better response. Their authors may not be experts in the energy industry, but their observations were not unreasonable and they raised questions that deserved answers.

  SCL responds that both reports ignored their inputs and judged them unfairly, and we suspect that there is some basis for that opinion. We suggest, however, that there is a middle ground here that is more appropriate for a utility seeking to confront its problems and constructively deal with them.

- We sensed in some of our interviews, both inside and outside of SCL, a reluctance to offer critical inputs.[75]

- SCL's response to the 2000 Deloitte & Touche audit of the Power Marketing Group, explained in more detail elsewhere in this report, was again symptomatic of a culture not receptive to improvement.

- SCL recently posted on the City's internal and external web sites a letter to employees and customers stating that our audit and the Mayor's City Light Review Committee's report represent "a strong affirmation of our quality as an organization and a sharp reminder that we can do better." While we appreciate the stance stated in these letters indicating a readiness by SCL to do a better job, it is inaccurate to suggest that our audit is a strong affirmation of quality.

- Much of the current financial crisis has been portrayed as a result of a lack of engagement by the City Council. However, we believe that the current financial crisis is largely the result of SCL's management practices, including not providing sufficient information to decision makers to make fully informed decisions. In addition, SCL and the City Council share responsibility for the lack of engagement by the City Council.

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[75] This should not be confused with SCL's unwillingness to share information with us, which was not a problem during this audit. Also, a reluctance to reveal problems is natural in an audit, especially one that is sponsored by an external group.

- We think a fundamental characteristic needed in any Chief Executive Officer is a strong sense of "the buck stops here" and responsibility for the utility's well-being and ownership in the direction of the utility. We believe the current SCL senior management needs to fully embraces this concept.[76]

In summary, based on all of the internal and external manifestations, we conclude that SCL senior management does not deal well with criticism and at this point culturally lacks the capability to use problems and setbacks as a stimulus for improvement. Similarly, self-analysis and continuous improvement, essential characteristics in a high performance organization, do not appear to be present. This defect in organizational culture can have major repercussions and, unless repaired, is sure to rob the organization of any chance of reaching its full potential.

SCL's current senior management culture approaches the level of a fatal flaw. The key question for the City's leadership then becomes, "Is the management team able and willing to aggressively confront this problem and turn it around?" A real commitment will be required since cultures are not created, nor are they effectively changed, overnight.

We realize that municipal utilities sometimes function in an environment where revealing one's shortcomings can be suicidal. Perhaps SCL believes itself to be in such an environment. If that is the case, the root cause of the problem may be shared with others in the City, and the City's leadership needs to make some hard decisions about its own management style.

Specifically, City leadership, including the Mayor and the City Council, should consider the degree, if any, that their own management style discourages SCL from frankly communicating about and dealing with problems. Dialog among the three parties will be appropriate to help SCL make the transition to a healthier organizational culture.

We also offer the observation that the current relationship between SCL management and the City Council, which has been characterized as "distant," makes it very difficult for either management or the Council to fulfill its responsibilities. We discuss this matter elsewhere in this report and will also observe that it may be related somewhat to our observation above (culture).

These observations are offered with the opinion that their solution is not necessarily outside the ability of the current senior management team. Of course, this presumes that management's response will be recognition of the issues and a firm and aggressive commitment to solve them.

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[76] While we acknowledge that the Superintendent, the City Council, and Mayor share responsibility for SCL's current financial situation, the "buck stops" with the Superintendent. If elected officials are proposing actions that endanger the long term health of the utility, the Superintendent's duty is first and foremost to SCL's ratepayers and citizen-owners. If conversations with elected officials cannot change their minds, then the Superintendent should bring the issue to the public, even at the risk of losing his/her job.

IV-F11 SCL's senior management team, when measured against typical standards that utility management teams are expected to achieve, has a number of areas in which it must improve its performance.

We have developed a scorecard of the typical skills, strengths, or expectations one might expect from a utility such as SCL under current industry conditions.[77] It is intended to give the reader a summary of where we see opportunities for improvement on the part of the SCL management team. It is extremely difficult to accurately measure the effectiveness of any company's management. It is particularly difficult to do so on this assignment because the project focus was on three specific areas: governance, financial management, and risk management. While these three areas shed some light on management effectiveness, our general review of operations also addressed some of these issues. The table below lists the major functions of management one expects in a well run electric utility and discusses how well the current SCL management team addresses these areas. We have provided our view of effectiveness with the following scale:

- 3 = currently effective;
- 2 = improvement needed; and
- 1 = inadequate and requiring significant improvement.

[77] A note about our scorecard. If one traces the management scorecard from the briefings during the week of October 6, 2002 through the preliminary findings and recommendations presented at the October 15, 2002 Energy & Environmental Policy Committee to this final report, you will note that some scores have shifted and the rating system has changed. This is part of the natural evolution of an audit finding. Auditors discuss preliminary audit findings with auditees. Auditors analyze the feedback, and if appropriate collect additional information to determine whether changes to the preliminary findings are warranted.

Management Function or System	SCL effectiveness	Evaluation of SCL and Suggested Action Items 3 = currently effective, 2 = improvement needed, 1 = inadequate and requiring significant improvement.	
Strategic Planning	Strategic planning on a company wide basis is no longer adequately performed. Recent efforts to update the strategic plan were incomplete.	1	A formal strategic plan and planning process are needed, with a formal integrated communication of shared mission, objectives and tactical plans.
Financial Planning	As discussed in the chapter on financial planning, the SCL financial model is used extensively for planning. There are, however, concerns that some inputs may be too optimistic and that its projections are not always heeded by decision makers.	2	As evidenced by an average annual build-up of over $100 million in debt, current financial planning is inadequate and financial planning issues need to be addressed immediately
Capital Budget Control	Capital spending continues to escalate at a high rate for an environment that includes restructuring. There do not appear to be adequate procedures or systems in place to assess the value of Distribution capital projects.	3/1	The rigor seen in the analysis of Generation Branch CIP projects needs to be applied to Distribution Branch projects.
O&M Budget Control	SCL management has implemented budget cuts to reduce O&M starting March 2002. Aggressive and long-lasting budget cuts may need to be implemented.	2	The O&M budget, which has been relatively level over the last few years, needs a major initiative to determine the optimum budget level.

Management Function or System	SCL effectiveness	Evaluation of SCL and Suggested Action Items 3 = currently effective, 2 = improvement needed, 1 = inadequate and requiring significant improvement.	
Staffing Control	It is very difficult to assess the appropriateness of SCL's staffing levels without an in-depth study. Reductions made over the last ten years appear to be modest given the increases in productivity due to new technologies and response to restructuring. A comparison of similar sized companies shows SCL to be at the high end on staffing.	2	Preliminary analysis shows budgeted staffing, which has remained relatively level for the last six years, to be relatively high compared to other large city electric utilities. A bottoms-up staffing analysis should be pursued.
Communication with City Council	It is clear that there is a serious communication issue between SCL and Council, and by all measures it appears to be getting worse. Both SCL management and key Councilmembers acknowledge the existence of this problem. City Council's memo to the Mayor's City Light Review Committee detailing lack of responsiveness by SCL highlights City Council's perception of this.	1	The City Council and SCL perceive that a problem exists in this area. SCL certainly has some responsibility for, as well as an interest in, improving the quality of these communications. This can only be improved with a strong commitment from the Mayor that he supports open, honest and timely communication from SCL to the City Council.

Management Function or System	SCL effectiveness	Evaluation of SCL and Suggested Action Items 3 = currently effective, 2 = improvement needed, 1 = inadequate and requiring significant improvement.	
Management utility expertise	There is an obvious and critical lack of senior utility managers at SCL with in-depth electric utility experience.	2	In our judgment the lack of direct utility experience has had a negative impact on SCL's decision making during critical times. Further, SCL has not fully implemented many good utility management tools now available within the industry. SCL needs to pursue more utility expertise for its senior management team, such as the addition of a Chief Operating Officer.
Use of operational performance metrics	The use of traditional utility operational metrics for establishing performance targets or tracking success is inconsistent at SCL. Much of the information currently produced is not provided to outside groups.	2	Without performance targets and the use of their results to establish and allocate resources, management cannot effectively measure the success of programs and systems. SCL should undertake a thorough inventory and review regarding how it uses performance metrics.
Degree to which management is proactive on major local, regional, and national issues.	SCL has been very proactive in addressing regional and national positions regarding deregulation and industry restructuring.	3	Very active.
Risk management	The power marketing and risk management functions, although generally meeting the utility's limited current needs, have a number of shortcomings that existed before and during the crisis and threaten the future.	2/1	This weakness should be considered unacceptable for the long-term but is somewhat mitigated because of today's limited risk position. Completing the Risk Management Manual and setting loss limits should be addressed immediately.

Management Function or System	SCL effectiveness	Evaluation of SCL and Suggested Action Items 3 = currently effective, 2 = improvement needed, 1 = inadequate and requiring significant improvement.	
Organizational Culture	The senior management culture of the utility seems to lack the "we can do better" attitude that is invariably present in high performance groups. This conclusion is evidenced by (1) SCL's generally defensive response to issues; (2) a less than enthusiastic response to improvement initiatives; (3) a tendency to dismiss criticism and attack its source, even when such criticism appears to have at least some merit; and (4) a bent towards explaining away past problems as opposed to learning from them.	1	Addressing cultural issues is particularly challenging for any organization and the Superintendent has expressed to us his desire to take a hard look at this issue and pursue ways to create a culture within SCL conducive to running a successful utility.

IV-R8 <u>The City Council and Mayor should ensure that SCL's management deficiencies are corrected.</u> (Refer to Finding IV-F10 and IV-F11.)

The Council and Mayor can take a number of actions in response to this audit, ranging from preparing a detailed action plan, to changing some or all of the current management team, to replacing the Superintendent.

We believe that an appropriate starting point may be through the reconfirmation process. According to the Seattle Municipal Code, the Superintendent is appointed by the Mayor and confirmed by the City Council subject to reconfirmation every four years.[78] After four years, the Council may reconfirm the Superintendent, or may not. Since it has been eight years since the current Superintendent's appointment was confirmed, the Mayor or the Council could initiate a reconfirmation process. This should begin with the Mayor informing the Council of his intention to, or not to, reconfirm the current Superintendent. If the Mayor does not initiate the reconfirmation, the Council could do so on its own.

There are several reasons we believe the reconfirmation process is important. It provides the City Council with the opportunity to provide the Superintendent with clear expectations for his/her job performance. The process can also be used to discuss the utility's and the Superintendent's performance. The Superintendent benefits by receiving agreed-upon job expectations and knowing that the Council cannot remove him/her outside the reconfirmation process.[79] The public benefits because they get an opportunity to provide input into the reconfirmation process, as well as hold their elected officials responsible for decisions made during this process.

The Superintendent's most important role is to ensure that SCL operates effectively and efficiently; produces accurate and informative reports to guide decision makers and inform the public; and complies with applicable laws, regulations, and policies. Elected officials' most important role is to define SCL's overall goals and direction and to ensure that the Superintendent is competently fulfilling his/her role. As discussed in the Governance Chapter, we believe that the Council will need to re-think the way it monitors SCL to ensure that the Council provides more meaningful and effective oversight.

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[78] SMC 3.08.010B states that: "The Superintendent of City Light shall be appointed by the Mayor and confirmed by a majority of the City Council, subject to reconfirmation every four years."
[79] The Mayor can fire the Superintendent at any time.

V. GOVERNANCE ISSUES

A. SUMMARY OF MAJOR FINDINGS

The issues raised in previous chapters show that Seattle City Light's (SCL) governance process could be more effective. Governance refers to the entity or entities that hold the responsibility and authority to (1) set an organization's major goals and objectives and (2) ensure that they are met. Ultimately, an organization's success or failure is the responsibility of those charged with its governance. Hence, improved governance is needed for SCL. While there are structural issues that may provide better governance of SCL, the primary responsibility for improving governance lies with those individuals charged with governing.

Currently, governance of SCL is divided between the Mayor and the City Council. The division of authority between the Mayor and City Council makes it a challenge to govern SCL. They both have governance responsibilities, but neither has the requisite authority to fully accomplish its responsibilities.

Other potential governance structures - an independent board, a quasi-independent agency, or a public utility district - also have drawbacks. The hurdles to overcome and the risks of moving to a new structure probably are not worth the advantages they might provide. Ultimately, with any structure the most important factor is the performance of the individuals in governance roles. Hence, our recommendations focus on modifying the current structure and improving the performance of individuals in governance roles.

Weaknesses in the current governance of SCL include:

- insufficient focus by decision-makers on key issues
- insufficient stakeholder input
- insufficient analysis of SCL policies and programs
- overemphasized focus on short-term matters due to the influence of local politics
- inadequate communications between the City Council and SCL
- significant deviation from best practices for boards of directors

B. ALTERNATE GOVERNANCE STRUCTURES

To better understand the alternatives available for improving the governance and oversight of SCL, we conducted a limited survey of comparable municipal utilities to obtain financial, operational, risk management, and governance information[80]. The survey was conducted

[80] The survey included Austin Energy, Clark County PUD, Colorado Springs Utilities, Jacksonville Energy Authority, Orlando Utilities Commission, San Antonio Public Service, Snohomish County PUD, and Tacoma Power.

with the assistance of personnel from the City Auditor's office. Eight responses on the governance issue were received. The survey results showed that three are governed by an independent board, two are public utility districts which have elected boards, and three are governed by a City Council. It should be noted that there are several variations within each broad category.

In addition, we carefully reviewed the *2001 Governance Survey* performed by the American Public Power Association (APPA). With regard to the governance issue, the APPA survey showed that 59% of the responding utilities were governed by a city council, 29% were governed by an appointed independent utility board, and 12% were governed by an elected board. For utilities with more than 50,000 customers, these same percentages were 37%, 39%, and 24%, respectively.

Neither our survey nor the APPA survey provided a strong governance preference for comparable municipal electric utilities. This should not be a surprise. There is no single best form of governance. Good governance is specific to the circumstances surrounding the entities involved. It is clearly dependent upon the relationships between the participants in the governance process.

The following is a brief description of four governance models we examined.

CITY COUNCIL GOVERNED

Good governance under this structure requires a strong commitment by the city council to provide the appropriate focus on the evolving list of issues confronting an electric utility. It also requires a significant financial commitment to make certain that the council has access to professional expertise with a strong understanding of these issues. Likewise, to successfully perform its governing and oversight function, there must be a commitment by the council to make certain that the expectations, roles, and responsibilities of the Mayor, Council, and utility are clearly communicated. When the governance function is performed by city council, the stakeholder input is typically considered to be received indirectly through the election of the council members. However, in some cities the council actively seeks the input of the stakeholders. With regard to the matter of the influence of local politics on the governance of the utility, this will always be an issue when the governance and oversight are performed by a city council. However, there may be ways to mitigate this influence. For instance, the council could create an independent utility oversight function to be performed by professional staff who are distanced from the influence of local politics.

INDEPENDENT BOARD GOVERNED

In several cities, such as Tacoma, the governance and oversight of the municipal utility is performed by an independent board. Usually the board members are appointed by the mayor and confirmed by council. Often the charter creating the board suggests the need for certain credentials and levels of expertise for board members. This helps to provide some assurance that the board possesses the requisite skills and can provide the appropriate focus on the key issues driving the electric industry. However, in some cities the board is an elected board. In the case of an elected board, the influence of local politics on the governing process is considerable. Where an independent board and city council co-exist it

is crucial to carefully distinguish the responsibilities of each entity with regard to governance and oversight of the utility. It is not unusual for a city council to want to retain its right to approve rate changes and financing. Independent boards, hence, can exacerbate the problems of divided board responsibilities. In some cases, state law requires that council retain its responsibilities. It is our understanding that this is the case in Seattle.

QUASI-INDEPENDENT PUBLIC AGENCY

With the advent of increased competition in the electric utility industry, several cities have investigated ways to provide additional flexibility for the utility to respond to the changing environment more quickly and without the fetters of a city government, such as the requirements of a civil service and government procurement regulations. One means to accomplish this is to change the municipal utility's organizational structure from an operating city department to a city-owned corporation under a single board. This frees the utility and its operations from much of the city bureaucracy to function as a typical corporation. A disadvantage, however, is that with this model, the board may be less motivated to seek stakeholder input. This form of governance has not been popular in the United States but has been tried in other countries such as Canada, New Zealand, Australia, and the United Kingdom.[81] Creating a quasi-independent utility would require changes to the City Charter and likely state law.

PUBLIC UTILITY DISTRICT

The formation of public utility districts is relatively popular in the Northwest and California. Under this structure, the governance and oversight of the utility is performed by an elected board. Usually the boards have three to seven members. Given the public power culture of the Northwest it is not surprising to understand the popularity of this form of governance. This model shares the shortcomings of the city council/mayor model in that expertise and staffing of the board are in no way guaranteed and local politics are also an issue. Since the board is elected for the sole purpose of overseeing the utility, there is more likely to be a stronger focus on utility issues than from a city council.

C. CURRENT SCL GOVERNANCE

The governance and oversight of SCL and its operations, financing, rates, and planning are currently performed by the City Council and the Mayor. While the Seattle City Charter states that the Mayor shall direct and control all subordinate officers, other governance responsibilities are divided between the Council and the Mayor. For example:

- The Council sets the Superintendent's compensation range, but the Mayor determines the actual amount.

[81] *Governance in a Changing Market* by Rand Corp. for Los Angeles Department of Water and Power, pages 25-30.

- The Mayor hires and can fire the Superintendent, but the Council must confirm and reconfirm the appointment.
- The Mayor proposes a budget, rates and the selling of bonds, but the Council must approve these actions.

The City Council addresses its oversight function through its committee structure. Currently, the three-member Energy and Environmental Policy (E&EP) Committee has primary oversight responsibility for SCL. The E&EP Committee typically meets twice a month, although special meetings are conducted on occasion. The Committee posts its agenda for a meeting ten days prior to the meeting. At every meeting, the SCL Superintendent provides a briefing on current activities and an update on emerging issues at the utility. In addition, presentations are made to the Committee by other SCL personnel who have responsibility for an issue on the agenda, by Council Central Staff, or by other industry specialists. Usually these briefings provide background information and support prior to Committee action on various resolutions and ordinances.[82]

Through resolutions the Committee establishes broad policy goals. Sometimes resolutions are used to state the City Council's opinion on some issue. Resolutions are also used to request information from SCL and often establish a due date for a requested report. An example of a resolution is when the Council, through the endorsement of the E&EP, adopted the "Earth Day" resolution which stated that SCL should use (1) "cost–effective energy efficiency and renewable resources to meet as much load growth as possible" and (2) "mitigate or offset greenhouse gas emissions associated with any fossil fuels used to meet load growth." An ordinance, on the other hand, establishes law. Passage of an ordinance is used to implement formal legal actions such as approving financing, changing rates, authorizing contracts, and approving budgets. To continue the example, the Council implemented the "Earth Day" resolution when it approved the SCL contract for the Stateline Wind Project by ordinance.

The Seattle City Council is supported in its decision-making by a Central Staff with 15 personnel. The Central Staff includes lawyers, financial analysts, and policy professionals. During a typical year, four to five members of the Central Staff will work on various SCL related issues. However, a smaller core group is assigned almost exclusively to SCL issues. This core group provides the E&EP with policy analysis. Typically, their work involves a critical analysis of SCL proposals, but it also assists with the development of E&EP initiatives. The staff's analysis is usually presented through memorandums and presentations to the E&EP.

The Mayor is supported in his role by staff from his/her office, SCL, and other City departments as needed.

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[82] July 9, 2002 memo from E&EP to Mayor's City Light Review Committee

D. ASSESSMENT OF CURRENT GOVERNANCE

To guide us in assessing the current governance of SCL we relied on the following questions:

1. Does the current governance of SCL provide appropriate focus on electric issues, especially as the industry restructures?

2. Does the current governance and oversight of SCL allow appropriate and meaningful input from all stakeholders?

3. Are adequate resources and expertise available to fully comprehend and respond to changes in the industry?

4. Does local politics unduly influence the decision-making?

5. Is there sufficient and meaningful communication between SCL, the Mayor, and the City Council?

6. Are those responsible for governing following best practices?

7. Does governance authority and responsibility match?

8. Would a different governance structure significantly improve the governance of SCL?

Below is our assessment of these questions with recommendations designed to strengthen the governance process. While our recommendations are addressed to the City Council, we believe that they also hold true for the Mayor.

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1. Does the current governance provide appropriate focus on electric issues, especially as the industry restructures?

V-F1 Increased focus needed on issues confronting SCL.

The issues dealing with a restructured electric industry have become increasingly complex and require ongoing attention. The area of risk management is a good example of how the complexity of the industry has changed, yet appropriate focus has not been provided as evidenced by the lack of complete follow-through on the August 2000 Deloitte & Touche Power Marketing Group audit. To give appropriate consideration to risk management related issues, one must be familiar with evolving energy markets, sophisticated financial analysis, and the quantification of risk exposure. Currently the City Council relies heavily on SCL and limited Central Staff resources to deal with risk management as well as other utility planning and financial issues. It also appears that the Mayor has not provided adequate oversight in this area. Both the Mayor and the City Council need to allocate sufficient time and concentration to these issues, as well as make the additional effort to acquire the expertise, training, and knowledge to fully comprehend them.

V-R1 Increase the City Council's focus City Council on SCL's needs. (Refer to Finding V-F1.)

The City Council needs to focus more on SCL by increasing (1) its understanding of issues and (2) the amount of time and resources spent on SCL issues. The Council must educate itself about electric utility issues through educational opportunities, such as workshops. For example, we have earlier recommended that Councilmembers participate in a workshop that would teach the fundamental concepts power marketing, its inherent risk, and the management of that risk.

In addition, the Council may want to consider restructuring itself to devote more time to SCL issues. For example, it may want to consider having all nine councilmembers serve on the E&EP Committee and then divide into several subcommittees covering such areas as power marketing and risk management, finance, rates and budgeting, resource planning and acquisition, environmental compliance, and operational performance.

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2. Does the current governance and oversight of SCL allow appropriate and meaningful input from all stakeholders?

V-F2 The process is missing a balanced voice from all stakeholders.

As the governance process has evolved recently, there has been less meaningful interest, input, and involvement from some stakeholders. For example, the Municipal League was a regular participant in past SCL debates and represented SCL ratepayers; however, its presence has been missing for several years until the publication of its March 14, 2002 report. Although the Council has solicited guidance from the Rate Advisory Committee, there is not a regular forum for a robust public debate of the issues. There are many stakeholders whose interests should be fully represented and considered in a more formal manner including good government groups, business groups, environmental groups, employee groups, creditors, and current and future ratepayers.

V-R2 Seek out and encourage participation by all stakeholders. (Refer to Finding V-F2)

The Council should actively encourage the participation and input of all stakeholders. The resulting public debate will lead to a better understanding of the issues from all perspectives. In order to resurrect the interests of these groups, the Council may need to meet with some of the stakeholders, encourage their active participation, and ensure them that their voices will be heard. The Council may also need to work with SCL to ensure that stakeholder groups are provided sufficient information to critically evaluate SCL's proposals and supporting analysis. The benefit from robust public debate on these issues will prove to be valuable to the community.

3. Are adequate resources and expertise available to fully comprehend and respond to changes in the electric industry?

V-F3 The City Council's governance and oversight function is too dependent upon a very limited set of analytical resources.

To perform its oversight role, the Council is very dependent upon a few Central Staff personnel who, admittedly, are very competent and knowledgeable but are limited in what they can do.[83] In addition, based on past history, this situation could change quickly and the Council would lose that institutional memory and continuity that are vital to the development and implementation of sound policy decisions.

V-R3 Increase the City Council's resources for critically reviewing and analyzing SCL's proposals and initiatives. (Refer to Finding V-F3.)

The City Council should increase its resources devoted to critically evaluating the operations of SCL as well as reviewing SCL's proposals and analyses and providing alternatives for the Council's consideration. The simple solution is to increase Central Staff and assign those personnel to deal only with SCL related matters. Another option is to create an advisory panel whose members possess much of the expertise needed to critically evaluate SCL and then offer their advice to the Council and the E&EP. One significant concern with this option is that it would be difficult to empower this panel with adequate authority to ensure that the Council's existing oversight function would be improved. Because of this panel's lack of authority it will also be difficult to attract and retain qualified personnel. Nevertheless, we believe both of these options would provide noteworthy improvements to the current governance and oversight function. However, our recommended option is presented below.

V-R4 Consider forming an Office of Utility Oversight to assist the City Council's governance and oversight function. (Refer to Finding V-F3.)

We believe the creation of an Office of Utility Oversight, modeled along the lines of the Office of the City Auditor, could serve the oversight needs of both the Mayor and the Council as well as the citizens. The Office of Utility Oversight would be managed by a director selected by the Chair of the E&EP and confirmed by Council. The director would be an exempt position and would serve for a fixed term, say four to six years, before re-appointment. This would help mitigate some of the influence of local politics.

The Office would have a limited staff with expertise in the relevant utility areas, along with a consulting budget to retain additional expertise as needed. The Office of Utility Oversight's role would be similar to the roles performed by staff at a state regulatory commission or a consumer advocate group. The Office would provide independent, non-partisan, quality analysis in the form of critical evaluations of SCL operations, proposals, and initiatives. The Council would retain its authority to approve rates and financing.

[83] July 9, 2002 memo from E&EP to Mayor's Task Force on City Light.

Assuming the Office attracts the appropriate resources, the Mayor and the Council's ability to competently deal with utility issues would be greatly enhanced.

We believe the formation of an Office of Utility Oversight addresses many shortcomings in the existing governance process and offers considerable benefits. We prefer this alternative instead of adding to Central Staff because an Office of Utility Oversight would be more independent from Council than is Central Staff. Since the Council would not have hiring and firing authority over Office of Utility Oversight staff, the staff would be more free to criticize both SCL's and the Mayor's proposals, as well as the Council's.

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4. Do local politics unduly influence the decision-making?

V-F4 The influence of local politics has adversely affected the governance and oversight function.

As a public-owned utility, we expect that local politics will influence SCL's and the City Council's decisions relative to utility matters. Given the pride and culture surrounding public power in the region, this influence can be appropriate. The question is whether the influence is unreasonable and negatively impacts the decision-making process. We think it does. The communication between the City's executive and legislative branches can change with each election. If the flow of information from SCL to the Council is stifled by the executive branch, as seems to be the case presently, then the basis for making informed decisions is limited. Also, the regular election of Councilmembers entices them to focus more on short-term matters, like the avoidance of another rate increase, rather than the incurrence of more debt. In fact, as reported elsewhere in this report, SCL's debt has increased significantly since the early 1990's while many municipal utilities were at the same time reducing their debt to prepare for increased competition.

V-R5 Mitigate the negative effects of undue influence of local politics by implementing Recommendations IV-R1, V-R2, V-R3, and V-R4. (Refer to Finding V-F4.)

Recommendations discussed above for increased staffing to address and highlight SCL issues and increased recognition for all stakeholders can help mitigate the adverse effects local politics has played on SCL governance. Further, requiring a strategic plan, longer term analysis from SCL, and implementing a more structured decision making process should enhance the Council's ability to focus on long term matters. The Council may also need to consider an ordinance requiring more open and free-flowing information between the Council and SCL including access to SCL resources.

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5. Is there sufficient and meaningful communication between SCL, the Mayor, and the City Council?

V-F5 The governance and oversight function would benefit from additional clarity, quality, and formality in the communications between the Council and SCL.

We think there is considerable room for improvement regarding the level and quality of communication. As mentioned above, the communication flow from SCL to the City Council can be influenced either positively or negatively at any time by the executive

branch. One SCL manager described the relationship between SCL and the City Council as "distant." In our interviews with SCL managers and City Councilmembers, we often heard one or the other saying what they "thought" the other wanted. Usually, these impressions were inferred from things the other party had said or done. For example, during discussions with SCL managers regarding the need for loss limits as part of a sound risk management strategy, the point was made that this strategy would likely not be implemented and approved by the City Council because of the Council's aversion to increasing rates. This presumption by SCL appears to have stifled the discussions between SCL and the City Council on SCL's risk management strategy.

Communication can only be improved with a strong commitment from the Mayor that he supports open, honest and timely communication from SCL to the City Council.

V-R6 Improve the quality, clarity, and formality of communications between the City Council and SCL in order to clarify the Council's expectations and distinguish the respective roles of the Mayor, Council, and SCL in the governance and oversight process. (Refer to Finding V-F5.)

The quality of the communications between SCL and E&EP and, more generally, the Council needs to be improved. We believe that SCL, the Mayor, and the Council could benefit greatly from a clearer exposition and formal statement of the roles, expectations, obligations, and responsibilities of each. One way that the Council could accomplish this would be through the regular use of resolutions and ordinances to clearly communicate its expectations and to explicitly distinguish the roles of SCL, the Mayor, and Council.

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6. Are those responsible for governing following best practices?

V-F6 The current governance process would be enhanced by use of board best practices.

By embracing and integrating, to the extent possible, commonly recognized best practices into the governance process, the City Council could significantly improve its governance performance.

Commonly recognized board best practices include:

1. Reviewing and guiding, in an integrated fashion, the organization's strategy, major plans of action, risk policy, annual budgets, financial policies, and business plans;

2. Monitoring the organization's performance and major capital expenditures;

3. Exercising objective judgment regarding utility affairs, independent from management;

4. Devoting sufficient time to board responsibilities and to understanding the issues that affect their decisions. This requires access to accurate, relevant, and timely information;

5. Recognizing the value of stakeholder input and providing them access to relevant information and encouraging their input;

6. Providing proper supervision of the chief executive officer regarding hiring, firing, monitoring, evaluating, and compensating as well as ensuring appropriate succession planning.

V-R7 Incorporate board best practices into everyday activities of the City Council and SCL. (Refer to Finding V-F6.)

Implementation of the recommendations in this chapter will allow the Council to incorporate some of these best practices. However, another suggestion for the Council to consider is establishing a committee with five to nine members to provide oversight of SCL. This committee could be divided into subcommittees to ensure proper focus on the various functional areas of SCL. The additional attention that this provides is in recognition of the fact that SCL makes up more than one-third of the City's budget . We believe the Council needs to devote significantly more time to SCL than it does now.

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7. Does governance responsibility and authority match?

V-F7 Authority and responsibilities do not always match.

The Mayor and the City Council do not have levels of authority that match all of their respective responsibilities. For example, the Mayor is charged with managing departments and ensuring that SCL develops and implements sound debt, financial, and risk policies. While the Mayor may ensure that SCL proposes rates based upon sound policies, there is no guarantee that the Council will approve the proposed rates. Conversely, the Council via resolution can direct SCL to develop sound debt, financial, and risk policies and strategic plans, but it cannot force SCL to produce those policies or plans. The Council does have the "power of the purse," but it is a cumbersome and heavy-handed tool. The Council risks damaging the utility as a whole if it uses this power, which is in no one's best interest. A primary tool of any board to ensure that its will is followed is authority to hire and fire the chief executive officer. With that power resting in large part with the Mayor, it is harder for the Council to enforce its will.

V-R8 Align responsibility and authority related to governance of SCL through increased cooperation between the City Council and the executive branch. **(Refer to Finding** V-F7.)

While there is value in the checks and balances built into the current system, because responsibility and authority are not in one entity, the Mayor and the City Council must cooperate to effectively govern SCL. The Council should initiate discussions with the Mayor to better align these responsibilities and authorities.

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8. Would a different governance structure significantly improve the governance of SCL?

V-F7 All governance models have strengths and weaknesses.

Each of the four broad governance categories (city council operated, independent board, quasi-independent public agency, and public utility district) has strengths and weaknesses. However, we recommend addressing the shortcomings of the current governance rather than moving towards a new structure. SCL's history strongly suggests that there is good reason to believe that with some enhancements the current governance process can be effective even in the more competitive industry environment that now exists for electric utilities.

V-R9 Maintain the current governance structure. (Refer to Finding V-F7.)

We recommend retaining the current governance structure because: (1) other models would require changes to the City Charter and state statutes and would likely be very expensive and disruptive; (2) the City had the vision to create the utility and derives financial and social benefits from it; and (3) it is possible to make changes within the current structure that could address the weaknesses we have identified.

City of Seattle

Gregory J. Nickels, Mayor

Seattle City Light
Gary Zarker, Superintendent

October 30, 2002

Susan Cohen
Seattle City Auditor
2410 Key Tower
700 Fifth Avenue
Seattle, WA 98104

Re: The City Light Audit

Dear Susan:

Thank you for the opportunity to comment on your audit report. I accept all of the audit's recommendations and I am attaching a copy of an immediate work program to implement them.

By and large, the audit has accomplished the goal set by the Council of identifying areas where improvements are needed, especially in the "culture" of the organization.

I see the audit as one of the tools, along with the Mayor's City Light Blue Ribbon Panel, that will help us be a better utility coming out of the energy crisis than we were going in. That is my commitment to our customers, our employees, the Mayor and Council.

This letter will offer brief comments on sections of the audit. In the interests of establishing a good understanding for the work ahead, I identify those few areas where the auditor, given more time, might have reached different conclusions

Risk Management
This is a balanced, thoughtful section of the audit. I also found the conversations I had with Rich Mazzini, the author of the section, very useful to me and my staff. While the auditor found our strategies, personnel and technical tools to be good,

he faulted us – correctly, I would say – for not communicating our strategies to the Council effectively enough and not educating the Council in the fundamentals of this complicated arena. His suggestion for a workshop on risk management with our elected officials is an excellent one. I will pursue that idea immediately with the council.

The auditor faulted us for not having loss limits in place prior to the crisis. His recommendation to immediately establish a loss limits mechanism is an important piece of work that we will begin quickly.

We also agree on the need to update our risk management manual and are at work on that project now. Updating the manual is a two step process. We will bring it up to date, clarify some confusing sections and establish reasonable document controls in the next few weeks. Following that, we will hire some outside expertise to evaluate the manual and help us craft it into stronger guidance for this critical part of our operations. We will again ask for Council review and endorsement when this second step is completed.

Another point made in this section talks about a defensive culture at City Light. There is some truth to this observation. We recognize this and will work to improve in this area. One issue that may have contributed to this observation involves our early and vociferous statements during the energy crisis about fraud and market manipulation by Enron. Many of these public concerns have turned out to be true, but it may have contributed to this perception that City Light was defensive about its performance responding to the energy crisis.

Financial Section

This section starts with a criticism of policy decisions in the 1990s that led to what the auditor calls "enormous debt" for the utility. But the author gives us no benchmark to judge what is the appropriate amount of debt. When we look at our peer public utilities, the American Public Power Association tells us that of the 19 public utilities in the US with over 100,000 customers, our utility ranks tenth in debt/customer. Further, just one third of our debt is attributable to our generation plant, the strongest tool we have to survive and compete in the deregulated environment.

We agree, however, that the utility's debt should be reduced, and that is the goal of the utility, the Mayor and the Council. We visited that issue last year with the council and developed new financial policies to control it. Adopted by resolution, those policies will get us to a capital program that is funded half by debt and half by current rates – the goal the auditor sets out. The policies allow us to eliminate

nearly $300 million in short-term debt by mid 2004. Additionally, our bonds are still judged to be of very high quality. Certainly, we can do better and will continue to improve. But the financial matters of our utility receive the closest and most regular scrutiny from independent financial experts representing all parts of the debt marketplace.

The auditor observes that City Light was not affected by the WPPSS crisis. But that crisis is a key story line in understanding City Light debt. Rates nearly doubled at the utility because of the collapse of the nuclear building program. That event caused rates to rise 80% in inflation adjusted terms during the decade of the 1980s. The response, in large part, was a policy to increase debt to keep rates stable in the 1990s. With these policies in place, rates fell by 15% in inflation adjusted terms during the 1990s. While not Superintendent at the time, I did observe those decisions closely. The decisions on debt were the result of a major policy discussion, thoughtfully made, in public, with all the stakeholders at the table.

In the financial discussion and elsewhere, the audit makes the insightful point that we need to do a much better job of tying our analytical skills to our strategic objectives, tactical plans and our discussions with the Mayor and City Council. I agree. We must get on with the strategic planning process including the development of strategic and tactical financial policies to support the new strategic plan. We should visit these issues again with the Council in the coming months as we work on the new strategic business plan.

Operational Section

I agree with the recommendations in this section. Among the most important is the need to update our strategic plan. We will work with the Mayor and Council to clarify the scope of work and time frame for deliverables. We believe final adoption should happen in the spring of next year. This will be the context for much of our discussion of the audit and its recommendations.

We are pleased the audit recognizes that we employ an excellent capital project assessment and completion techniques in the Generation Capital Program. Our capital program has been an area of continued focus and improvement. Starting when Councilmember Pageler became chair of the Utilities and Environmental Management Committee, we embarked on an effort to fully analyze our capital program. We commissioned an independent study, which helped us develop a new plan that focused our efforts on the rehabilitation of our generation plant. The auditor points out that we need to do better capital planning in our Distribution Branch similar to that done at Generation. We have completed an

initial assessment of our distribution system and are ready to share it with the Council. Just as we did with the generation projects, we plan to engage appropriate third party engineering review of the many projects that will come out of the assessment.

The auditor makes several observations about the management team's qualifications. He notes that management could benefit from a more diverse utility background, but he also observes that management team has very strong and effective working relationships in the region and nationally.

Governance

The observation that our current form of utility governance can and should continue to serve us well is an observation I support. The engagement of our elected officials served our community well over many years. It is the reason we have been a leader in this industry at various times in the utility's history. We need their involvement now more than ever.

The key to their involvement is good communication and the trust and confidence that results. The audit report chastises all of us for poor communications. I accept the criticism on behalf of City Light and look forward to our work together.

I think that the advisory committee proposed by the Mayor's Task Force on City Light will be a useful addition to our communications loop. It will provide advice to all the parties – the Mayor, Council and the utility and the added perspectives will result in better decisions.

I disagree with the auditor about the relationship of the superintendent to elected officials. I see the Superintendent as accountable to the Mayor and the Council. The auditor argues that the "buck stops" with the Superintendent, but under City Charter and Washington State Law, elected officials have the ultimate responsibility for the utility and are accountable to the public for their stewardship. It's my job to present our leadership with options, the best information and to press my view of what is best. After the debate, however, their decision becomes my direction and I respect it, and I implement it. It's not appropriate for the superintendent to go around the CEO (the Mayor) and his board (the Council) and complain about their decisions.

Summary
The purpose of the audit is to help us move in the right direction. In some cases – our new financial policies, our Generation Branch capital planning, and our resource plan – we're already well-underway. In others, we've got a lot to do. We have been through a difficult period in our industry's history that stressed our human and technical capabilities to the max. But we commit to the City's elected officials that we will learn from these events and be stronger for the experience.

We welcome the opportunity to engage the Council and Mayor in all the issues before us.

Sincerely,

Gary Zarker
Superintendent

GZ:jmr

Enclosure

cc: The Mayor of Seattle
The Seattle City Council Members

Seattle City Light Draft Work Program
Key Elements for Discussion with Executive, City Council and Advisory Board
(Audit Recommendation Number)

- Debt Management Strategy and Plan
  (II-R1,7, III-R14; IV-R2, 3, 4, 5, V-R1)

  -Write Primer on Current Policies and Practices
  -Benchmark
  -Define Goals, Objectives and Trade-offs
  -Review Capital Expenditure Requirements
  Systematic approach to CIP planning and evaluation
  3rd Party Assessment of Distribution System Capacity Plan
  Sustainable CIP
  -Review Funding Sources
  -Identify Issues and Evaluate Alternatives
  -Produce Debt Management Strategy and Plan Document, including stress test across alternative industry futures

- Comprehensive Financial Strategy
  (II-R1, 2, 3, 4, 5, 6, III-R14, IV-R2, 3, 4, 5, 6, V-R1)

  -Review established financial policies, rate setting objectives and resource policies
  -Evaluate components of current (baseline) financial forecast
  -Complete staffing, technology/automation assessments
  -Identify issues and opportunities
  -Clarify reporting
  -Define strategies, tactics and implementation methods in light of stress test across alternative industry futures

- Risk/Power Management
  (III-R1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, V-R1)

  -Update manual and establish controls
  -Revisit Deloitte & Touche Audit Recommendations/Status
  -Hire outside expertise: scope to be defined
  -Employee development
  -Tool and technology assessment
  -Conduct workshop with elected officials
  -Establish loss limits and structure for their timely implementation
  -Clarify roles and responsibilities
  -Adopt risk management policies

- Update to 2000 Strategic Resource Assessment
  (III-R14, V-R1)

  -Document and model complete and transmitted to Executive and Council
  -Define timeframes for upcoming resource decisions
  -Monitor, review and lobby potential changes to industry structure pursuant to FERC's Standard Market Design and Regional Transmission Organization recommendations and potential federal legislation
  -Strategize and kick-off Boundary Dam Re-licensing Project

- Strategic Business Plan: Pulling it all together recognizing uncertain industry futures
  (III-R14, 15, IV-R1, 2, 7, V-R1, 2, 5, 6, 7)

  -Comprehensive overview of City Light's Current Policy Framework
  -Complete "Lessons Learned from Energy Crisis"
  -Review Previous Work
    1998 Vision document
    1996 Business Plan
    Lines of Business, programs and related metrics
    Industry future scenarios
    Stakeholder processes
  -Customer Service Plan
  -Environmental Investments
  -Public Benefits
  -Succession planning/employee and organizational development
  -Incorporating Risk into our Strategy
  -Formal City adoption

- Communications
  (IV-R2, V-R6, 7, 8)

  -Metrics: decision making and reporting
  -Stakeholder Input
  -Elected official workshops/briefings
  -Information template for decisions
  -Adopted communication protocols